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AUSTRALIA
AND
NEW ZEALAND
ILLUSTRATED

By
WILLIAM D. BOYCE

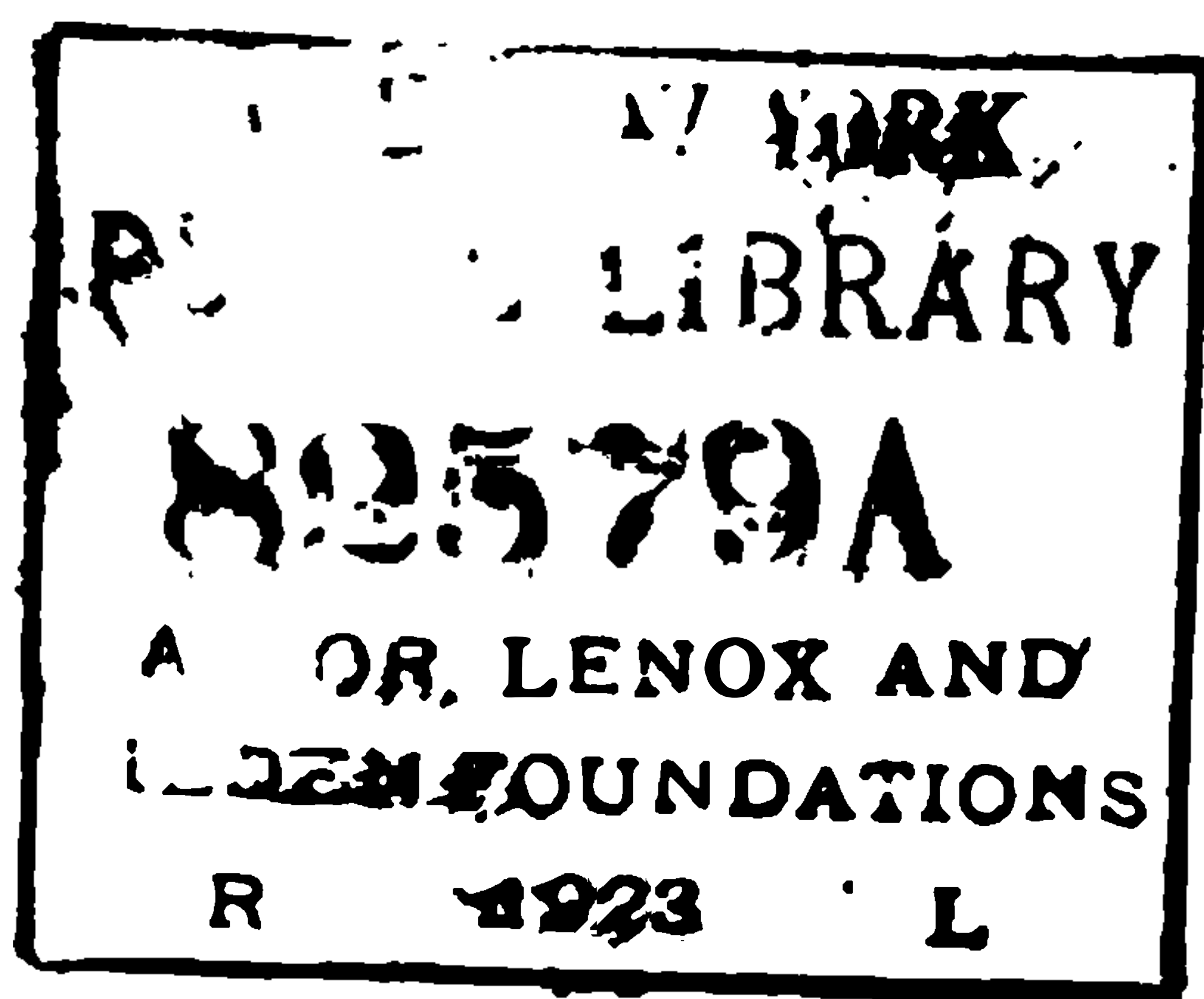
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AND "LONE SCOUT."

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The Right Honorable William Morris Hughes is the Premier of Australia. He is an able, conscientious man of unusual ability and indefatigable industry. Born in Wales in 1864, he went to Australia when he was twenty years old, with nothing much but determination and poor health. In 1894 he was elected a labor representative and his political career has been a succession of triumphs. As the War Premier he showed the qualities and courage of a true statesman. In Australia they call him "a piece of political radium." The United States, thru the works of Henry George, contributed to the Premier's political philosophy and influenced taxation policies in Australia. The picture presented herewith is from a photograph of a bronze bust of the Premier made by Professor Derwent Wood, distinguished British sculptor and Royal Academician.

COMMONWEALTH OF AUSTRALIA

MELBOURNE, 4th March, 1921

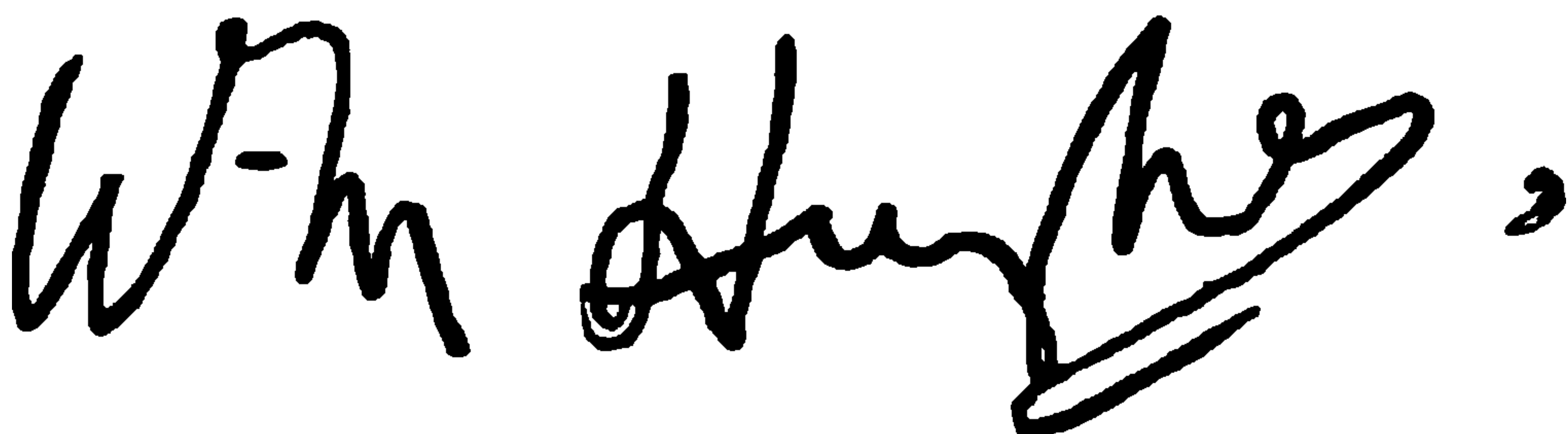
DEAR MR. BOYCE:

In extending to you a hearty welcome to Australia, I desire to express appreciation of your object in visiting the country. We cannot ignore the fact that the bond of blood and language has been strong enough to hold the United States to the United Kingdom, despite the deliberate machinations of mutual enemies. Nor can we forget that we fought and bled together in the greatest war of all time. In our outpost of the British Empire, Australians have realised to the full the significance of this mutual regard.

Not only to us, but to the whole world, the continued friendship of the two great Anglo-Saxon races means peace and progress. All that makes for a closer union should be encouraged, and anything which threatens it should be condemned. We in Australia look to the sister Democracy of America for co-operation in problems of mutual concern. Our destiny, like the destiny of your Western States, lies in the Pacific. On the shores of this vast ocean are gathered the bulk of the peoples of the earth. They differ in language, ideals and religion. The rapid modernisation of many of these peoples may increase rather than diminish the problems which inevitably arise where peoples of different races congregate.

So we feel that we—the white outpost in the Pacific—may look to the United States with a confidence born of mutual ideals. In our hands lies the destiny of the Pacific, and in our common task lies our strongest bond of friendship.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Wm Hughes', with a large, sweeping flourish at the end.

W. D. BOYCE, Esq.,
MELBOURNE
Menzie's Hotel

PRIME MINISTER

This is a suggestion of what the white man found when he discovered Australia. Every whim and fancy of Nature found expression in the physical aspects of the country. Forests of tropical luxuriance, vast stretches of barren deserts, sterile mountains and valleys rich in verdure, and in the midst of this, the primitive blackfellow—waiting for the white man's magic.

INTRODUCTION

PRIOR to my departure for Australia, one evening at the Union League Club in Chicago, I asked three business men—men known for their business sagacity and intelligence—what they knew about the Lonely Continent. Two of them frankly admitted their ignorance, and the third said:

“Australia? Why, that’s where they raise kangaroos and Anzacs. Both of them will fight like h—l if you get them in a corner!”

The only book on Australia I found in this same club’s big library was published the year I was born. Australia is a friend of the United States; she wants the United States to be her friend. Men who share the dangers of the bush, the desert and lonely mountains, who today divide the last jug of water, even tho they know tomorrow they may die of thirst, are full brothers of the pioneer stock of the United States. More than any other country, with the exception of Canada, Australia is producing a breed of men of that virile, resourceful type which dominated the United States at the time of our Civil War. The philosophy of democracy developed in Australia is not, in any substantial particular, unlike the philosophy of democracy in the United States and Canada.

It has been my privilege to travel in almost every country in the world, and, weighing my words, I say that nowhere have I been extended a more cordial welcome than in Australia. I do not flatter myself that this was intended as a personal compliment; rather I am sure it was evidence of this cordial eagerness to show the United States, thru consideration for her visiting citizens, every reasonable respect and kindly feeling. Officials of the states and the Commonwealth went out of their way to entertain me and make available to me government records and information which otherwise I could not have collected in a long time. Knowing that the Australian government, dominated by the Labor party, is attempting some radical things, I improved this contact with various officials frankly to discuss these policies. In subsequent pages I deal with some of these experiments. The Commonwealth and

states will try anything once. They are not afraid of a new idea.

These experiments in Australia's political laboratory are further justification of our getting acquainted with her. We may profit by her experience.

Everywhere the newspapers sought me for interviews. The Queensland Press Institute, of which Mr. W. Farmer Whyte was president, entertained me in Brisbane. Both the president and Brigadier-General Spencer Browne in introducing me commented on the things Australia and America had in common and showed the most friendly feeling toward the United States. I told the newspaper men something about our problems and what we were thinking in these days of readjustment, and every paper in Brisbane made copy of my talk!

Much the same thing happened in Sydney. I was invited to be the guest of the Institute of Journalists at a luncheon. The presiding officer called on me for remarks. Every word I uttered found its way into the press stories. They were good sports, too. I wore my Sons of American Revolution badge and "kidded" them about my representing thirteen British colonies while they represent only six.

Invariably newspaper men wanted to know about our international policies and what we were doing with our domestic problems. They wanted to know what, as an American, I thought of Australia, its past, present and its future. Mr. R. McMillan is "The Gossip" for the Stock and Station Journal, published in Sydney. By virtue of having been in the United States for many years he is doing much to give the Australian public the right slant on his American cousins. C. Brunsdon Fletcher, editor of the Sydney Herald and dean of the Australian press, has written three wonderful books on the Problems of the Pacific, which should be in every public library in the United States.

In area, Australia is practically the size of the United States. Its natural resources are abundant. Climatic conditions are favorable to a more diversified agricultural and horticultural activity than is possible in the United States. Most of the great desert districts in Australia can be reclaimed

for productive use. Today the country has 5,000,000 people, exclusive of the aboriginal tribes. She has established, and, I believe, never will and never should change from a "white" policy. A century hence Australia is likely to have a pure white nation, surpassing the present mixed population of the United States.

But with 5,000,000 inhabitants established, for the most part in the coastal regions, vast stretches of the interior practically are uninhabited except by savage and semi-civilized tribes. My good friend, the Rev. John Flynn, superintendent of the Australian Inland Mission, a man who is devoting his life to the material and spiritual welfare of the pioneers, sometimes uses an airplane for making calls. He was making a vigorous campaign, while I was in Australia, for "flying doctors." His idea was to establish medical posts on the frontiers from which doctors, with the use of planes, might care for the men and the occasional woman, stricken by disease or accident in the far-out desert districts. If doctors had to use airplanes for their calls in the United States we would feel that our population was fairly well scattered, to say the least.

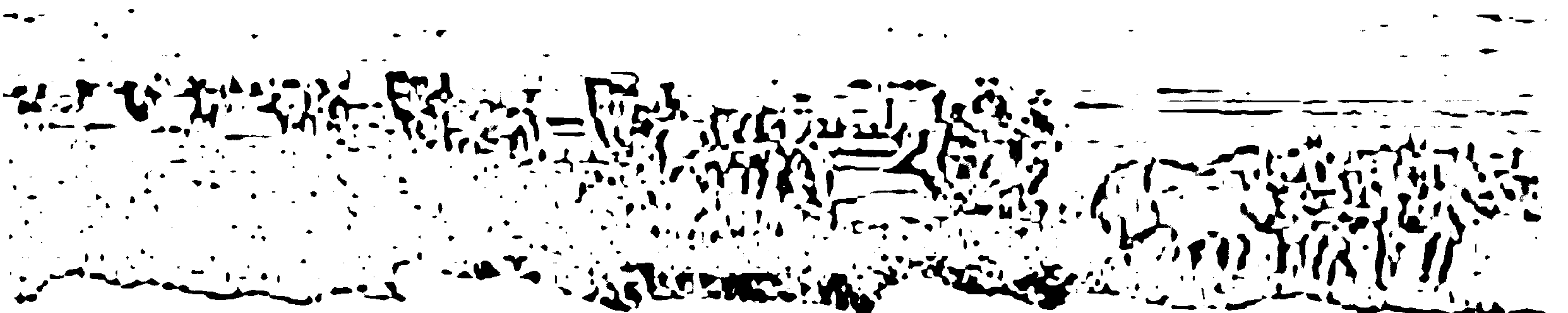
As a matter of fact in the back of the beyond districts of Australia there is no white population except the daring prospector and explorer. If there is an accident or illness, no help is available. If there is death there is no ceremony or clergy. It was Dr. Flynn who told me the story of the prospecting party that got into the far-out country when one of its members died. There was no wood for a coffin and no preacher for a funeral service. A grave was scooped out of the sand and the body placed in it, but the companions of the dead man could not bring themselves to cover the body without a prayer or a hymn. None knew a prayer and none remembered a hymn. Finally one fellow said he did remember a song, and when his comrades insisted that he sing it, because any kind of a song was better than none, he sang, "For He Was a Jolly Good Fellow."

Political, economic and racial considerations dictate the wisdom of establishing intimate contact with this aggressive nation,

and in writing this book I have endeavored to make a modest contribution to better understanding of the far-away Continent of the Pacific by the white races of the world. My work in this field makes no pretension to historical completeness. It is, rather, the notes of a newspaper reporter, calculated to help one group of humans to better know and understand another group. Nevertheless, I had a definite object in view all the time, the same as I had in my books on South America and the United States Colonies.

It would be impossible for me either to express to the officials of the Australian Commonwealth, Australian states, and to the many private citizens and the newspaper fraternity my deep appreciation of their hospitality and co-operation, or to convey to the reader an adequate impression of the cordial character of the receptions tendered me everywhere I went. I can, however, acknowledge the debt and agree to pay it on the installment plan by improving every occasion to encourage closer relations between Australia and America. The following pages will, I trust, impress the reader as a worth-while payment on this obligation.

W. D. BOYCE.



Harvesting wheat in South Australia. Each machine cuts, thrashes and sacks the grain as it goes.

AUSTRALIA PICTURED BY AN AMERICAN.

(FROM THE SYDNEY MORNING HERALD.)

MR. W. D. BOYCE of Chicago, one of the prominent figures in the newspaper world, has been in Australia for three months, and his impressions of us as a people are very interesting. These impressions he proposes to embody in a series of articles in the newspapers which he controls, and to publish, later, in book form. Mr. Boyce's son (Mr. Ben S. Boyce), who is associated with his father in journalism, is simultaneously visiting Papua and the former German territory in New Guinea, in order to study first-hand the country over which the Commonwealth has now mandatory control.

His extensive travels, not merely through Australia, but in Africa, South America and other parts abroad, and his wide outlook on affairs, eminently fit Mr. W. D. Boyce to speak as a competent observer of those things which have made appeal to him in Australia.

Mr. Boyce, who has covered about 2,000 miles in Australia, by motor, and who has visited every State, thinks the Australian people are the frankest people he has ever met. They compliment themselves, he says, less than the people of any other nation which he knows of first-hand. They not only magnify the little things which they think are likely to hurt them as a nation and a people, seeing them as through a glass darkly, but they are apt to be so blind to many of their virtues as to allow them to speak for themselves, instead of the people themselves trumpeting them throughout the world.

The interviewer asked Mr. Boyce for a thumbnail impression of the picture that he is taking back with him. His train of thoughts is, in brief, something like this. The United States, first of all, knows nothing of this young nation with whom it has so many identical interests. Australia, Mr. Boyce is going to tell America, and an even wider audience, through his book, has within it, after working out its problems, all the constituents of a wonderfully successful race. "There are only two classes of people in the world," remarks Mr. Boyce—"the pro-

ducer and the non-producer—and Australia, in proportion to its population, has a larger percentage of producers than perhaps any part of the world. One of the best things that could happen to Australia would be to find her Commonwealth and state governments cut off from over-sea loan moneys. I mean it, for it would compel her to think more of the development on broad lines of her wonderful resources. If you cannot live on a country when it is new and rich, like this fair land, how are you going to live on it when it is old?

“Your scanty population of five millions or more people is something of a nightmare to Australia, seemingly, but think of your future. Right down the corridor of time, unless you swerve from your White Australia policy, in which lies largely your safety, you are going to be of pure white British stock. The difference between your births and your deaths is 2 per cent. per annum in Australia. It works out this way: Even if you did not get a single immigrant, you would have ten millions of people in 30 years, 20 millions in 60 years, 40 millions in 90 years, and 50 millions in a century, through natural growth—as many people as we had in America in a century. And that 50 millions of people you can feed and take care of because you have the resources, under wise development and prudent government. Australia, producing the same that we do, has an immense area, which appears to have been only scratched on the surface.”

“I have wanted to understand the merino wool and the sheep question in Australia,” Mr. Boyce proceeded to say, “and how it is that you can raise such fine grades of cattle so near the equator. As a rule, graded-up cattle cannot be raised near the equator; but you do raise them here very largely, apparently, because of the drier climate. Our best meat is produced by fattening with corn after the cattle have come off the grass, because there is a large part of the United States, and of Canada also, where the winter months are of such duration and severity that the cattle for the time being have to be stall-fed. It is one of your advantages over us, this wonderful climate of Australia.”

The conversation with this engaging American personality



The picture shows the dense growth of ferns in a eucalyptus forest. No other country is so rich in ferns as Australia. Plant life which long since disappeared in other countries, survives and flourishes in Australia.

turned to the industrial and the political life of Australia. The subject was introduced, not by Mr. Boyce, but by the interviewer; but it is just one of those directions in which Mr. Boyce thinks Australia is too apt to make a lot of the little things that irritate it. For it is his impression that, although men get into high places in Australia with the backing of Labour, they have been men big enough, and wide and broad enough in outlook to realise that there are two sides to a question. He instances, for example, the Prime Minister (Mr. Hughes), whose place, he feels, Australia would find it difficult to fill, although it is inclined to criticise him. There are three fundamental qualities about Mr. Hughes which impress our visitor. They are his honesty and integrity of purpose, his deep sense of loyalty and lofty patriotism, and his marked ability. Then there is Mr. Theodore, the Premier of Queensland. The responsibilities of office have brought with them a realisation on his part that there are two sides to a case. And so with others. With such men, and with a patriotism such as it manifested during the war, Mr. Boyce feels that Australia will always rise superior to the extremist element, which occasionally froths and bubbles. There was the reported absence of flags on the chief civic hall on Anzac Day. It was, in his opinion, one of the best things that could happen in Australia, because of the lessons which it must drive home. The basic sound sense of the British stock in this country will finally win through, in Mr. Boyce's opinion.

"You can size up Australia's position very closely with the aid of figures," says Mr. Boyce. "Twenty-five per cent. of Australia is as good as any 25 per cent. we have in America. Twenty-five per cent. of your country, again, is as poor as the poorest 25 per cent. we have: and 50 per cent. of your country is medium poor where 50 per cent. of our country is medium good. That is the only difference between the two countries as far as the sustaining of life is concerned. But your climate is so much better than ours, it costs less to live and to produce your meat and your grain here. In these respects, you will always have an advantage over any other place

in the world, and you will, therefore, live cheaper than any other country, as you do now."

The Australian cities, it appears to Mr. Boyce, have expanded at the expense of the country. "In this country," he reminds us, "60 per cent. of your people live in the cities and towns of over 10,000 population; while in our country only 30 per cent. of our population lives in the cities. We have found the big cities complaining of being held down and taxed for our country districts, which send two-thirds of our members to the State and Federal parliaments. In Australia, the position is reversed. The country appears to feel that the city is fattening on it, so to speak. There is a movement now in the United States to incorporate into separate states half-a-dozen of the larger cities. Australia, I believe, will always experience the rumblings of dissatisfaction until she has smaller and more states, permitting of better representation for the agricultural and manufacturing interests. Both the big cities and the country will feel that legislation is discriminatory as long as they are tied together too closely."

Discussing arbitration, Mr. Boyce said collective bargaining had brought to the American wage-earner the best working conditions and highest salaries paid in the world. In Mr. Gompers, American Labour had a very sane leader. The unions realised that they could be successful only if the manufacturers were successful, because it was obviously only with successful operations that they could furnish good conditions and wages. The result was a spirit of cooperation between employees and employers. Capital had never been afraid to invest in the United States; but from what he had been able to gather, it had been afraid to invest in Australia—without justification, he believed, for it appeared to him, as he had already pointed out, that the men who finally got to the top in Australia were not the rabid element. Socialism, therefore, appeared to be more of a bogey than a reality, and the capitalist was scared more than he was actually hurt.

Contrary to popular notions, Australia has its wintry landscapes, as this picture of the Tasmanian coast in winter shows. Many persons think of Australia as a land of deserts and jungles. As a matter of fact the continent has much wonderful mountain scenery and its climate ranges from tropical heat to antartic cold. Some of the mountains are perpetually snow covered, and some of the glaciers tempt and test both amateur and professional mountain climbers.

AUSTRALIA

CHAPTER I

EARLY HISTORY OF AUSTRALIA

AUSTRALIA of today is a “white man’s country”—the five million white Australians call themselves natives—and yet no discussion of the “Lonely Continent” could hope to be complete or accurate or give any true picture of its present

or its future unless it took into account its long past, which for the most part can only be surmised. To study that past means to study the aborigine, the black-fellow, of whom a bare fifty thousand remain.

Possibly some day scientists will prove where they now only assert that Australia is the oldest land surface in the world, or has changed less than others. Geologic evidence goes to show that it had its beginning in the dawn-mist of the earth’s morning. Biologic evidence of the country’s antiquity is not lacking, either. The animal and plant life is peculiar to Australia. Primitive forms which are found nowhere else on earth today still thrive there. Such unique types as the kangaroo, the emu, and the platypus, the only egg-laying mammal, date to a period long

before the coming of man. Faint resemblances of the curious animals and plants to fossil forms found in other quarters of



Australian natives with a dug-out canoe which typifies the acme of their inventive genius.

the globe indicate that at some remote period Australia was isolated from the rest of the then land surface of the earth, and that until comparatively recent years there was absolutely no intercourse.

Just how far back the aborigines date, no scientist is prepared to state with any certainty. All, however, are agreed that the bushman, or blackfellow, as he is more commonly



Like "Topsy" in "Uncle Tom's Cabin" the aboriginal baby in Australia "just grows." The black mother knows nothing of eugenics. In spite of the government's effort to protect these aborigines they do not survive the processes of civilization.



The blackfellow knows nothing of a permanent abode. A hut or cave, to shield him from the sun and rain, is all he wants. For centuries these natives roamed in tribes, knowing nothing of farming. The only animal they domesticated was the wild dog, known as the dingo. This is a typical native family on the front porch of their bungalow.

called, is the most primitive of human kind. The early view that he was degenerate is hardly proved; he, like all black men, has not developed. He has stood still since the dawn of history—indeed, he has no history, no tradition worthy of the name. No stories of his origin save highly fanciful and comparatively modern fabrications have been found. There are no family traditions, even, which date back more than a few generations.

A few ethnologists have tried to establish a relationship between the blackfellows and the Indians of South America. Other scientists point out that if Australia ever was connected with the American continent it must have been long before

there could have been any possibility of human occupancy, as there is no trace of similarity in the animal life.

There are writers who regard the blackfellow of mixed Papuan and Malay blood. That a relationship exists between them and the ancient Dravidians of India is the contention of others, who regard as the connecting link the picture of a red right hand daubed on rocks in various parts of Australia, the red hand being the symbol of Siwi, the "Avenger," or "Destroyer," mentioned in Hindu lore.

Certain it is, however, that wherever the aborigines came from in the first place, there was no further intercourse. After that first migration—if such it was—the land was cut off from all communication with the rest of the world, just as for untold centuries it had been cut off from the changing world of trees and plants, of fish and fowl and furred and feathered animal life. The flora and fauna of Australia today hark back to prehistoric ages known elsewhere only in fossil form. Giant ferns grow in its forests today such as flourished elsewhere before the age of coal. Gigantic varieties of eucalyptus—gums, the Australians call them—tower high in the air as they did in the hot, steamy days before the glacial period. The changes which went on in the rest of the world seem not to have disturbed Australia—it has worked out its own destiny in seclusion. Its popular name, "The Lonely Continent," has been honestly earned.

So when we study the Australia that the first white explorers found we are examining the Australia that was in the beginning. Its history is unique in that there is none. Its animal and plant life are unique in that they are to be found nowhere else. Its first inhabitants, too—the aborigines—are unique in that some scientists insist that they are our closest link to primitive man. I doubt this, as there are five distinct colors or races. The Australian black is a mongrel. A glimpse of their mode of life and curious customs is both interesting and worth while.

Altho the aborigines are called blackfellows, they are more brown than black. They are unlike negroes in that their hair

is not woolly, their noses not so flat and their lips do not turn outward. When discovered by the white men they had not risen to the use of metals, and the only animal they had succeeded in domesticating was the dingo, or wild dog. They roamed the continent in tribes, living by hunting and fishing, tilling no fields and having no houses other than crude huts.

It was a sad day for the aborigine when he fell into the ways of the white man, for which an all-wise nature had never fitted him, for it marked the first stage of his gradual extinction as a race. Wearing clothes was the first step, and the vices of the white man followed soon after. Before long the blackfellows were the victims of the same old ills to which the white is heir. Rheumatism and pulmonary diseases, if not entirely new complaints among these wild children of the simplest of simple life in the bush, were greatly aggravated by contact with the whites and the changed habits to which that contact gave rise.

Today the aborigine as a race is dying out. It is regarded as probable that, in the older states of Australia at least, there will not be a full-blooded blackfellow surviving a generation hence.



The aboriginal youngster gets his breakfast. Queensland has a larger aboriginal population than any other Australian state. Some of the women live with Chinese, but this doesn't contribute to their popularity. One woman was ordered by her tribe to decoy her Oriental husband to his death. She called him from his shack and he was at once pierced by a dozen spears. The butts of the spears, falling to the ground, he lay the body upright, much to the merriment of the natives, that being the aboriginal idea of a good joke.

Here are two "future-greats" of Australia's aboriginal society. They stand no chance, however, of growing up to be president because the Australian "white policy" precludes such a possibility. In spite of the government's best efforts the mortality rate among native children is high and points to the ultimate extinction of the blackfellow.

Since the days when sturdy Britishers first set their faces toward this land of promise the bushmen have found themselves gradually swept back by the insistent demands of civilization, and old hostilities and feuds between blacks and whites show that it was not always a peaceful penetration. There are blackfellows, however, in the interior of the great continent who even today have never seen a white man—a good thing, perhaps, for while there are many instances of humane treatment of the aboriginals by the encroaching whites, certain types of whites have been a baneful influence in their lives. From the “far out-back,” as the wild districts are called, there occasionally comes the story of a tragedy in which a blackfellow is one of the central figures. More often than not a woman



Schools for native children are maintained by the Australian government and various mission organizations. While some scientists assert that the blackfellow of Australia is the lowest order of the human race, education works a remarkable improvement in the children. This picture was taken at the Norcia Mission Station, Western Australia.

is in the case. But these cases are becoming fewer, with the establishment of close reservations and with government boards and missions to watch over and care for the blacks.

Cannibalism was almost universal before the coming of the white man. It is not wholly a thing of the past today among the wilder tribes. Not long ago, a hundred and twenty miles from Thursday Island, an aboriginal woman, sixty years of age, was killed and eaten by an old blackfellow on the ground that she was a nuisance. Various reasons have been given by the aborigines for the eating of human flesh. In some cases no doubt the chief reason was the conservation of food—primitive Australia was a land of frequent short rations. In other cases the eating of the flesh of a deceased person was a part of the ceremonial of burial and was a mark of affection and respect. In many tribes where this was the case there is no evidence that people were killed for the purpose, not even captives of war.

Some tribes admitted frankly that they liked the taste of human flesh—preferred it, in fact, to that of the pig, which, I might mention, is not a native of Australia, but came with the early white settlers. There are many instances where the eating of one's fallen enemy was inspired by the belief that the strength of the victim passed on to the one who made a feast of him.

I found that where this practice was a part of the funeral rites it was only portions of the body which were eaten, an arm or a leg. Other parts of the body were then preserved and carried about as relics or charms. Quite frequently the hand of a dead relative would be worn around the neck as an instrument of sorcery. Mothers would carry the dead bodies of their children, even in a putrefying state, along in their wanderings. Sometimes this task was imposed as a penalty on young mothers whose children had died as the result of carelessness.

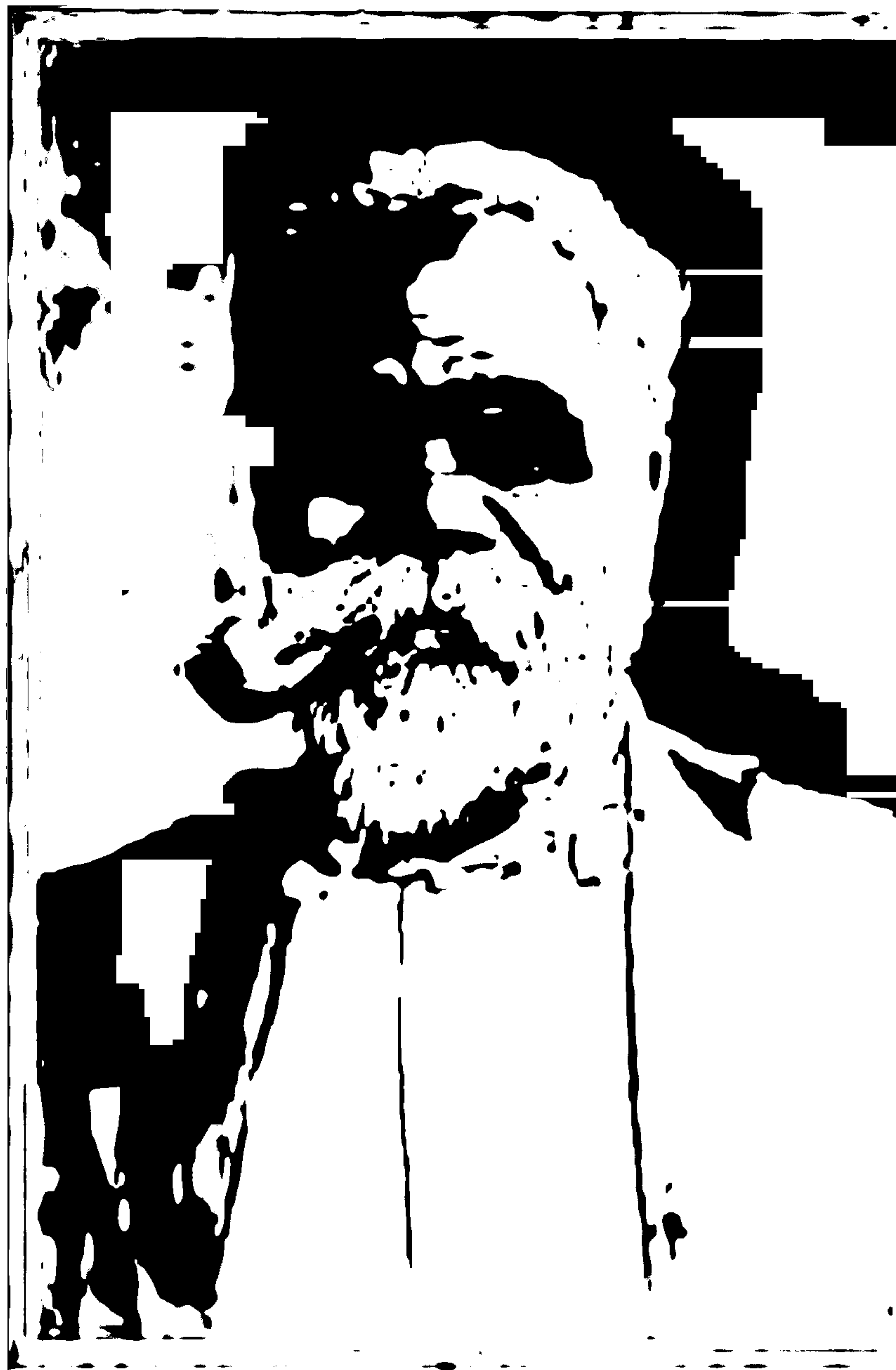
The practice among the blackfellows of marriage by betrothal—often when the contracting parties are infants—by elopement, by forcible abduction, by capture from another

tribe, and by mutual consent, varied with different tribal communities. The regard which the blackfellow has for the observance of the traditions which have come down to them is shown in many ways.

For instance, marriage between members of the same class—the classes vary in number and are designated by the names of animals, each indicating a definite degree of relationship—has been held to be grossly immoral. Even the mating of those related by marriage ties only, is forbidden in many tribes. Contrasted with such evidence of eugenic considerations are many barbarities whose origin has long been swallowed up in the black night of superstitious ages. There is the amputation of one or more joints of the little finger of one hand practiced upon the young women of some tribes, or the knocking out of the front teeth of the wife-to-be in other localities. Laceration of the body was practiced by both men and women, sometimes as a matter of lamentation over the dead, sometimes as part of the ceremonial at a feast.

Out in the Kimberleys, in Western Australia, on the occasion of a blackfellow's death his wives were clubbed to death, amid much pomp and ceremony, by the old married men of the tribe.

In all the tribes the initiation of the youths into man's estate—called man-making—was conducted with much for-



This is Archie Blackmore. I met him on the veranda of an Adelaide hotel where, after wishing us "Good day, gentlemen and ladies," he passed the time and before the porter spied him collected enough money to buy a Panama hat with a bright blue ribbon on it, and get his whiskers trimmed. He is representative of the blackfellows who are rapidly dying out in South Australia.



This native basket weaver staged a special performance for the benefit of the camera man. It is doubtful whether the old chap works very steadily at his job because life is too easy in the tropics of Northern Queensland to demand much effort. A bush shelter, a few branches for a bed, an old sack for covering on chilly nights, a little food and less clothing, and he is satisfied.

mality, the exact nature of the ceremony varying with the different tribes but being essentially the same in certain rites, notably that of circumcision. It usually took place in a sacred circle within which very often a gigantic human figure was crudely sketched on the ground. A spectator told me of the ordeal of one young blackfellow as witnessed recently:

"He was obliged to fast for several days. A great smoke was raised by burning green leaves on the final day, and he was permitted to view the women at a distance thru the smoke. He was tempted to break his fast by offers of food, to exhibit fear by being subjected to threats of brutal treatment, to lose his gravity by comic representations. Failure to undergo the tests proposed meant the severest sort of punishment.

"After the ordeal was successfully submitted to, the youth was eligible for marriage, but not until he had passed thru all the stages of initiation, including, in many tribes, the plucking out of the hair in handfuls, fire-treading and sitting upon green leaves heaped over a smoldering fire."

In the case of women the rites were similar and the operation performed just as painful, the initiators in this case being the married women of the tribe. In no case were men allowed to witness the ceremony attendant upon the initiation of young girls, nor were women present at the man-making ceremony. Both sexes, however, mingled at the feast which was held afterwards. Whenever possible, a number of youths underwent the tests at the same time.

When the Prince of Wales visited Australia two years ago, he expressed a wish to see the two strangest things in the world—one an animal, the other an operation.

The animal is the platypus, which lays eggs like a turtle but suckles its young and carries them in a pouch. Insofar as the baby platypus is concerned, mother platypus is a complete family hotel, providing room with board. To the scientist the platypus is one of the freaks of the animal world.

The Prince's desire to see the strangest operation in the world was not as easily satisfied as his interest in the platypus. The operation is performed on a male and it is quite common



The Australian blackfellow does not prosper in the midst of the white man's civilization. The natives hold tenaciously to their indolent, easy-going ways of living, contented with their reed huts, absorbing the white man's vices but none of his virtues. They will wear a few of the garments of civilization—when they have to.

with the native blacks. The Prince's train was stopped at a government-supported camp of these aboriginals, where the stage had been set for the operation. There was one white woman, a "nut" on developing the black race, living with this tribe. She met the train and took the Prince in charge, thereby upsetting the program, because the operation couldn't be staged in the presence of a woman. Lord Hamilton, from London, a member of the party, said, "Just leave it to me." He rushed up to the woman, saying: "Oh, Lady Hamilton heard of your great work out here and made me promise to have you tell me all about it." The "nut" dropped the Prince. Hamilton missed seeing how a "whistler" is made, the Prince's curiosity was satisfied, the bell rang and the party was on its way for Victoria.

Time has done away with many old customs, but the use of the primitive letter-stick as an aid to love-making is as prevalent today among the wild tribes as it was in ancient times. The stick was a bit of twig, perhaps an inch and a half long, and cut with three small notches, one to represent the "*dhomka*," the person who carried the message, and the other two to represent the lovers. The stick might be carried for months, where the lovers belonged to different tribes, but invariably delivery was finally made and was a token of their engagement.

Lamentations for the dead, sounding like the hideous howling of wild dogs, and including many ceremonies calculated to keep away evil spirits, are followed by burial in the fashion approved by tribal custom. In localities where parts of the body are eaten, usually only the arm-bone is given burial, the final ceremony taking place months after death. Usually the corpse is first placed on a high platform of rudely fashioned limbs in a treetop. The withered flesh and bones are subsequently taken down and bundled into a hollow tree, or in a cave. Quite often the skeleton is dismembered and relics given to all the relatives and friends of the deceased.

If the dead man has been killed, his murder must be avenged, but his murderer must first be discovered, which is

done in a highly original manner in some tribes. A shin-bone, wrapped in greasy coverings, is held over a fire. When it sputters the flying grease is supposed to point out the guilty one. Quite often a sorcerer has to be called in, and spells are relied upon to establish the identity of the guilty one. Quite often an innocent man is killed to vent the spite of the sorcerer ;



These two aboriginal women coyly consented to have their photograph taken if permitted to wear their pipes. The women, who are called "gins," are cheerful and even-tempered and some of them make faithful servants on the farms that are "far out-back," as they say in Australia. The photograph suggests that woman's fondness for a dog is not an exclusively aristocratic trait.

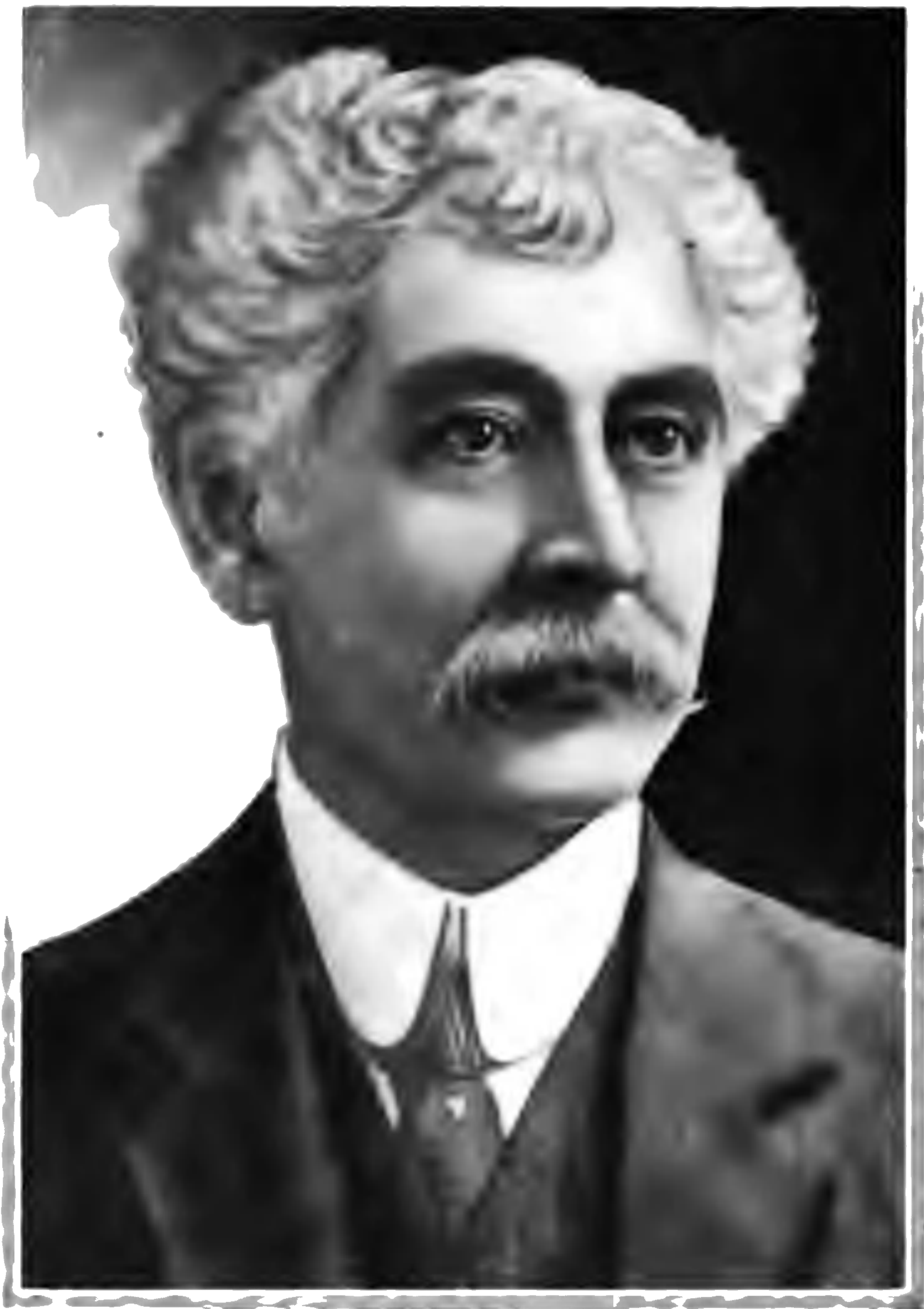
often, too, the first blackfellow of another tribe who is met by the avengers is slain in cold blood to meet the needs of primitive justice.

Human life was cheap among these simple people, and the rule of "a life for a life" did not always insist that the right life be taken. After "justice" had been dealt out, even if the true murderer should be revealed, a small payment to the relatives of the dead man was usually considered sufficient reparation; the account had already been squared.

Among the interesting customs of the aborigines are their *corroborees*, exhibitions of which are at rare intervals given even now on special occasions in Australian cities. The *corroboree* is usually the feast given at the close of some tribal ceremonial, altho occasionally it has no especial significance, but merely represents the blackfellow's idea of a royal good time. In their original form, many of the *corroborees* are licentious in the extreme and culminate in the loosest sort of conduct both among the married and the unmarried.

At these *corroborees* the men are usually the sole performers, the women sitting in front by great fires and beating time by striking sticks together or clapping their hands. The dancers, smeared from head to foot with colored clay in weird designs, and decked out with feathers and flowers, engage in fantastic wriggings of the body and wild leaps into the air, accompanied by facial contortions wonderful to behold. Many of their antics reveal a keen sense of humor, which is final proof that the blackfellow is not a degenerate, but merely an undeveloped child.

The aborigine, in spite of the humane treatment accorded him by the government, seems doomed to extinction. As the years pass Australia is becoming more and more a hundred per cent "white man's country."



Frank Coffee, author of "Forty Years on the Pacific," is one of the foremost authorities on Pacific affairs. Altho he has lived in Sydney for forty years he still is an American citizen. Mr. Coffee was a fellow passenger on the *Makura* out of Vancouver. He was returning from a visit to the battlefields of Gallipoli, where one of his sons, a British officer and former newspaper man in Vancouver, met his death in the ill-fated attempt of the British to drive the Turks from the peninsula. Beginning as a printer in the United States, Mr. Coffee later went into business, which took him into every port of consequence in the South Seas. He is a keen observer and a most interesting conversationalist—when he will talk.

Not infrequently it develops that Mr. Coffee is better posted on Pacific countries than the persons who live in them. On board the *Makura* one day, a rotund individual, talking about New Guinea, remarked that it was a typical British possession. Some one corrected him, saying that part of the island is a Dutch possession and that Australia now not only controls the part which before the war belonged to Germany, but, also, the British territory.

"I've lived there all my life," said the rotund gentleman, "and I never heard of Dutch territory in New Guinea."

An argument and a wager followed. It was agreed that Mr. Coffee's book should be accepted as the deciding authority.

"I never knew that before," said the rotund one when he learned that he had lost.

CHAPTER II

THE COMMONWEALTH OF AUSTRALIA

CREDIT for the first recorded discovery of Australia goes to the Dutch. In 1606, Willem Jansz, in the *Duyfken* (the *Dove*), touched the shores of York Peninsula, believing, however, that he was on the west coast of New Guinea. In 1616, Dick Hartog, as told later in this book, also landed on Australian soil and left tangible evidence in the form of a tin plate, to be followed eighty-one years later by another Dutch adventurer, who took down Hartog's plate and put up one of his own.



Australia's
Coat of Arms.

It is pretty definitely established, however, that other white men had either visited Australia, or at least knew of it, for as early as 1521 the continent is shown on maps, particularly those of French cartographers, which would suggest that French explorers were the first to view Australia. By 1542, on the maps of Jean Rotz, the outline shown begins to conform to our present conception of the coast line, but it is certain that Sieur de Gonnevillle and Jean Parmentier, the only two Frenchmen known to have sailed the eastern seas, did not go farther than Sumatra. It is probable, therefore, that the maps were drawn from information obtained from Portuguese sources, tho the earliest known voyage of the Portuguese, that of Gaetan, was made in 1545, and it is not known that he reached Australia.

In the same year (1606) that Jansz discovered Australia, but later in the year, Luys Vaez de Torres, who commanded one of the ships in the Spanish Squadron which had been

ordered to make explorations in the Eastern seas, became separated from the other vessels and continued his voyage eastward, touching the eastern end of New Guinea and then passing thru the strait which bears his name. He touched the northern coast of Australia at several points, but, finding no safe harbor and fearing the aborigines, who showed anything but a peaceful front, he did not explore farther.

Various Dutch explorers appear to have sighted the new land and to have made vague reports of its extent, so in 1642 Abel Jansen Tasman was sent out from Batavia to discover its real size and possibilities. He found the island now known by his name, Tasmania, but supposed it to be a part of the mainland. His voyage, however, settled many of the geographical questions raised by previous explorations.

Captain James Cook, in 1770, was probably the first English-



Federal Parliament House in Melbourne. This is, and will continue to be, the national legislative hall until the "made-to-order" capital is completed in the Yass-Cangerra district of New South Wales.



Beneath this gum tree in December, 1836, a British officer formally proclaimed that Great Britain recognized South Australia as a colony. For more than 85 years it has stood near Glenelg, a suburb of Adelaide, visited each year by hundreds of persons. The state has braced it with steel rods and it looks good for many more years.

man to set foot on Australian soil. He had been sent out in the ship *Endeavor* to Tahiti to observe a transit of the planet Venus. Returning from there, he continued to New Zealand, passing thru the strait now named after him. Continuing south, he reached a land hitherto unknown to the mapmakers, which, because of its many plants altogether new to botanists, he named Botany Bay. The land along which he coasted he named New South Wales from its resemblance to the coast of Wales.

Two years later, in 1772, he was sent out to extend his explorations. His reports led to considerable talk of settling the continent and claiming it for England, but it was some sixteen years later that the first shipload was landed—convicts.

The loss of the American colonies by Great Britain was in large measure responsible for the early activity in colonizing. England needed a place to dump her political prisoners and the many persons convicted under the severe laws of the period.



Imagine 1,200,000 acres thickly studded with smooth, straight trees, 200 feet tall on the average, four feet in diameter and more than a hundred feet to the first branch and you will have a picture of a typical karri forest in Western Australia.

Slightly more than 83,000 convicts were transported before the practice was discontinued. While many of these were hardened criminals, no doubt, a fair proportion were men whose misdemeanors today would be punished by thirty days in jail. In a good many cases the only crime was debt. Quite a number of Irish and other political plotters against the Crown were banished to Australia.

The actual annexation of the country took place on January 26, 1788, when Captain Phillip read to the First Fleet, assembled in Sydney Cover, the words of his commission. The first few years of the occupation, in which the new settlement was moved from Botany Bay to Port Jackson, were full of disappointment. Inland exploration was begun, but it was many years before any but adverse reports were brought back by the hardy pioneers. Such men as Gregory Blaxland, Governor Macquarie, John Oxley and Charles Sturt brought back conflicting reports, but all were practically unanimous in condemning it as a drought-stricken country, little better than a desert. Sturt's story of his experiences among the aborigines read like fiction, and for years his account of the blackfellows was the final word on these unhistoried people.

In the meanwhile, the coast line was pretty well charted and here and there settlements were begun. This tendency to hold to the coast has continued to this day, and at the present time more than eighty per cent of the population live within a hundred miles of the sea, and there are no inland cities of over 10,000 population save six mining camps.

There are at the present time six states comprising the Commonwealth, plus the Northern Territory, which has not as yet been granted all the rights of self-government. These states are: Victoria, New South Wales, Tasmania, Queensland, Western Australia and South Australia. Up until the forming of the Commonwealth there was constant jealousy and bickering between the states, Victoria and New South Wales furnishing most of the disturbance. For many years this jealousy frustrated the efforts of the broad-minded element which saw that there could be no true progress in solving



This view of a glacier stream on Mt. Kosciusko, New South Wales, shows that Australia has its regions of snow and ice as well as its district of tropical heat and vegetation.

Australia's many and peculiar problems until they were united.

The movement toward federalization had its beginning as early as 1850, but it was not until 1883 that the first real step was taken. The attempt was sporadic, but in 1885 an important move was made, which, while barren of definite results, at least materialized the desire for union. This took the form of a Federal Council, created by the Imperial Parliament for all Australasia. However, only four colonies were represented: Victoria, Queensland, Tasmania and Western Australia.

The Federal Council possessed only limited legislative powers in minor legislation, and as it had no power to enforce its rulings, it was really only an advisory body. It held eight meetings, continuing to function until the forming of the Commonwealth, but its usefulness had ceased long before.

In 1891, a national convention met at Sydney, declared in favor of federation and formulated the principles upon which the proposed Commonwealth government should be based. The

fundamental idea was that of a strongly centralized union, but with the provision that all powers not expressly delegated to the Commonwealth should remain vested in the individual states. Substantially, this is the same States Rights doctrine which played havoc in the early days of our own Union. It accomplished the same result in Australia, delaying federation for a good many years.

The four years till 1895 were unproductive of definite action, but in that year a conference of colonial premiers met at Hobart and drafted the Enabling Act, providing for the election of delegates to a constitutional convention. This act was passed by the various colonial legislatures, and on March 22, 1897, the constitutional convention met at Adelaide, adjourning first to Sydney and then to Melbourne, and succeeded in drafting a constitution to submit to the people.

Victoria, South Australia and Tasmania adopted the constitution by substantial majorities. Queensland and Western Australia took no action. New South Wales failed to pass it, altho a majority voted in favor of adoption; the legislature had stipulated that a minimum of 80,000 votes—about two-thirds of the electors—would be necessary for ratification.

The main point at issue was the matter of the rights to be reserved to the states. The constitution as submitted was a compromise between loose federalization and centralization. The former undoubtedly was favored by the great majority of people, but met with strong opposition from the powerful labor element, which was especially influential in Victoria and New South Wales. After certain changes demanded by this latter colony had been embodied in the document, it was re-submitted and was accepted by all save Western Australia, which came in later.

The constitution of Australia is obviously modeled on that of the United States. Altho there are several vital departures, there are the same general divisions of government. Profiting by the experience of this country, however, the framers of the constitution paved the way for a more centralized government than ours; and provided for its participation in certain

fields denied the Federal Government of the United States. Such subjects as divorce, corporations, bankruptcy and the nationalization of the railroads were included within the scope of federal power.

The legislative function of the Commonwealth is vested in a federal parliament, composed of the sovereign of Great Britain or his representative, a senate and a house of representatives. The Senate is composed of six members from each state, elected from the state at large for a term of six years. The members of the House of Representatives are chosen for three years. There must be as nearly as possible twice as many representatives as there are senators. These are apportioned among the states according to population, but no state may have fewer than five representatives. The Governor-General, appointed by the Crown, may summon, prorogue or dissolve Parliament, but it must meet every year.

To most Americans the capital of Australia is Melbourne,



Another view on Mt. Kosciusko, the highest point in Australia. This peak is 7,328 feet above sea level and has been set apart by the government as a national playground. It is popular with those enjoying winter sports.

and indeed Melbourne has been the seat of government, but the constitution provided that: "The seat of government of the Commonwealth shall be . . . in the state of New South Wales . . . not less than one hundred miles from Sydney.

The Parliament shall sit in Melbourne until it meets at the seat of government."

In 1908, the district of Yass-Cangerra, in the southeastern corner of New South Wales, was selected as the site of the future capital of the Commonwealth. In 1909, the state agreed to grant to the Commonwealth an area of about nine hundred square miles, two square miles at Jervis Bay for a port and certain other areas aggregating 2,302 acres necessary for the defense of the port.

The site of the capital lies about two hundred miles southwest of Sydney. It is within sight of the snow-capped peaks of the Australian Alps. It can hardly be said to be in the geographical center of the continent, but it is in touch with the most densely populated sections by rail and water. On this virgin spot a complete city is being planned—certainly a unique experiment in capital-choosing.

In 1911, the government invited the submission of designs for the laying out of the city, offering substantial prizes for the best plans. Americans will be interested in knowing that first place was awarded to an American, Walter Burley Griffin, a Chicago architect. A composite design was finally adopted, and on March 12, 1913, occurred the ceremony of laying the foundation stones of the column which marked the beginning of the city building. The World War put a damper on further construction, but since the close of the war the building has been resumed and is being pushed, altho considerable opposition is being encountered to the spending of more money, chiefly from Victoria, in which the present capital is located.

During the visit of the Prince of Wales to Australia in 1920, he presided at the laying of the cornerstone of the Parliament Building. To date bridges and roads have been built, electric lighting, sewerage and a water supply system have been installed, and model cottages for the workmen constructed, but

it will be some time before Australia's made-to-order capital will be ready for occupancy. When it is completed, however, the government of the Commonwealth will be located in



This picture from the Botanical Gardens in Brisbane, gives one a very good idea of the variety of tropical vegetation to be found in Australia, reminiscent of prehistoric ages.

a city rivaling in beauty many of the capitals of the Old World.

The history of the political development of Australia is a strangely complicated one for Americans to follow, with many phases entirely inexplicable unless one knows the early story of each of the states. Many modern divisions are based on the jealousies of commerce, of immigration, and of mining in the early days.

The key to the puzzle of Australian politics today, however, is to be found in the Labor party. The history of that party is full of surprises even for those who live in the land of the kangaroo, the creature of great jumps. When the Commonwealth came into being the Labor party was a controlling factor in the new order, as was evidenced by the failure of New South Wales to adopt the first draft of the constitution. During the World War the Labor party sat in the saddle, and now, when the world is trying to recover from the upset condition of that period of struggle, the Labor party still holds the reins and is the producer of political storms.

Yet the Labor party represents a minority of the electors. Again and again it has been given power, because of its promises and its evident sincerity, but always thru the "balancing voter," as the independent voter has been called. Every election in the Commonwealth shows that the balance of power lies with those who are neither hardshell conservatives nor red revolutionaries.

The Labor party is responsible for much legislation aimed to render the lot of the laborer less onerous. Before I left the United States I had heard a great deal about the labor courts which had been instituted to do away with all disputes between employer and employed, and prevent all strikes and lockouts. I landed in Sydney during a big strike of transportation workers, both rail and water, which lasted nearly three months. The labor courts could do nothing, as the workers refused to obey the court's orders.

When the trades unions gathered strength about thirty

years ago, one great strike after another gave them much advertising and prestige. However, their gains were merely transitory, for wages have always been determined by the law of supply and demand, and capital is ever more mobile than labor. The strikers were advised that in order to maintain their hard-won positions they must take the fight into Parliament and gain their ends by constitutional means.

In 1890 the great shipping strike throttled Australian industries. Defeated as strikers, the workers turned to the ballot box, and at the New South Wales election of 1891 a large number of Labor members were sent to the State Parliament. In this campaign a young man of twenty-seven particularly distinguished himself for the fervor and resource with which he threw himself into the struggle. In 1894, he was elected as one of the labor representatives. When I visited Australia I had the great pleasure of discussing Australian affairs with him. He was at that time Premier of the Commonwealth of Australia, the Right Honorable William Morris Hughes.

He was born in Wales in 1864, but at the age of twenty, with a schoolboy companion of the same age, he set out for Australia, landing in Brisbane. As poor as it was possible to be and frail in body, this youth faced the continent that was later



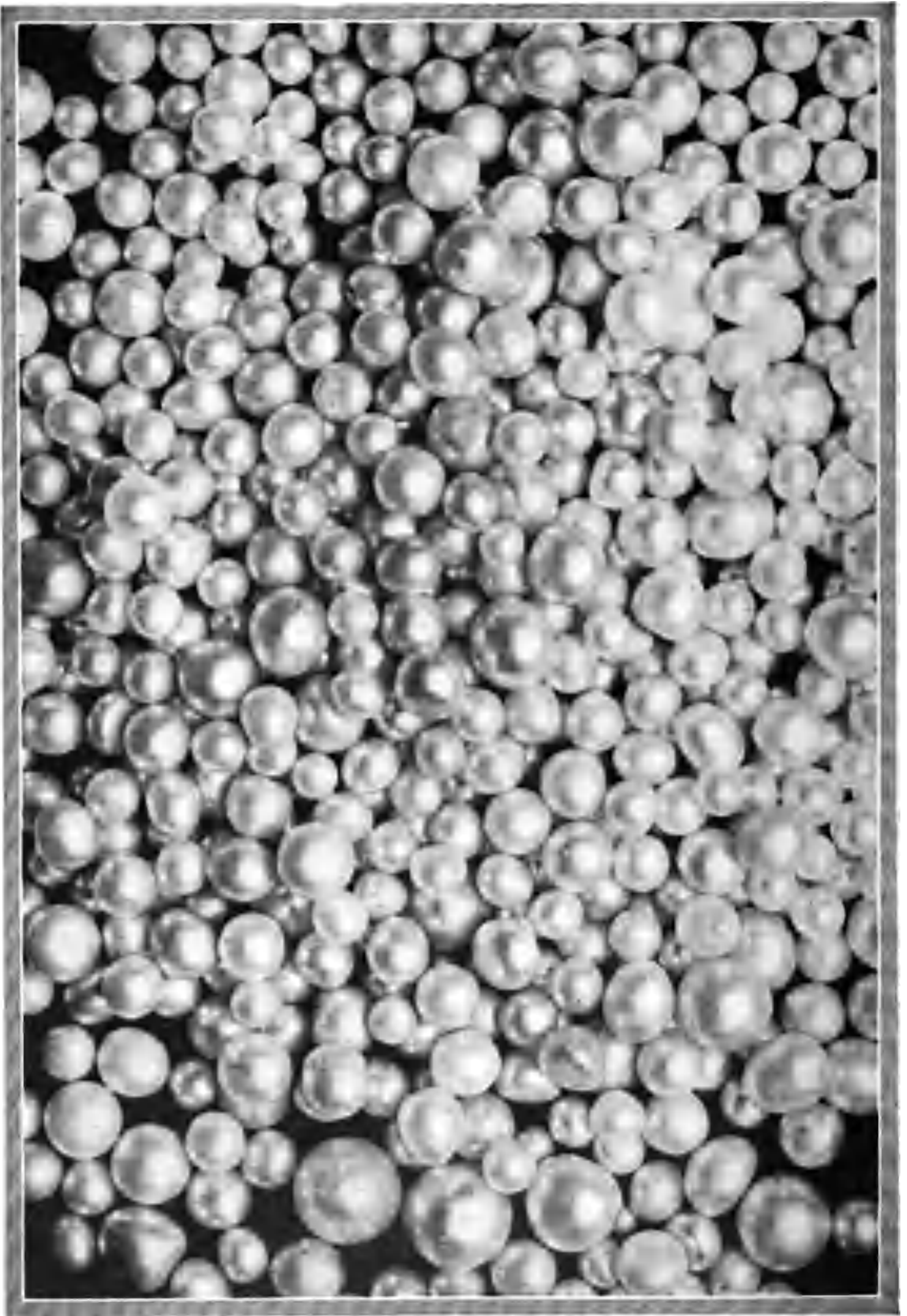
Camels play an important part in the transportation problems of the more barren districts of Australia. In the desert areas they are depended upon almost entirely. The picture shows a carting outfit in Northern Territory and along a stretch of country that is anything but dry.

to hail him as its Prime Minister. He went about four hundred miles inland, where he worked in a railway freight shed. Later, on sheep stations, as ranches are called in Australia, Hughes was shearer, stockman, and fencer. In 1890, he opened a small shop in Sydney, where he sold books and repaired locks. Here he also found time to read. Henry George's "Progress and Poverty" made a strong impression on him and resulted in his forming a land tax association in Sydney. While there he also organized the Sheep Shearers' Union of Australia.

Once in Parliament he quickly sprang into prominence because of his ability to debate, his unconventional methods of attack and his instinctive knowledge of human nature. When the first Labor government came into power in the Federal Parliament in 1904, Hughes took office as the Minister for External Affairs, a position for which he had qualified himself during his state parliamentary period, when he had spent his "spare" time in the study of law.

He was acting Prime Minister on two occasions, but it was in 1915 that he became Premier in fact. During the war he was an electric personality in uniting the country against the German menace, which in certain parts of the Commonwealth was not so keenly felt. He left the Labor party because of its failure to recognize Australia's war obligations, and led the Nationalists, who returned him to Parliament with an overwhelming majority. He smashed the German monopoly which controlled the products of Australian mines, and instituted compulsory pools to control the output of wheat, wool and butter. When no ships were available for carrying supplies, it was Hughes who secured them.

He was Australia's representative at the Peace Conference and while there did signal service in forcing recognition of the necessity of the continuation of the "White Australia" policy. Lloyd George called him "one of the men upon whose courage, insight and inspiration the British Empire depends." In Australia they call him "a piece of political radium."



The pearling industry of Australia centers at Broome and Ninety Mile Beach. For pearls such as are shown in this picture, men risk their lives. The white man does not make a good diver. Filipinos, Malays and Japanese predominate in the diving profession. The pearl industry at Broome is worth between \$1,500,000 and \$2,000,000 a year to the Commonwealth.

I found him to be a very human, affable, likeable man, very deaf, and with little of the politician about him.

The "White Australia" policy, spoken of in the preceding paragraph, is the settled purpose of the Commonwealth government to preserve the continent for the white man. The immigration laws are administered so as to exclude all colored races as well as undesirable elements of the white race. Legislation is directed particularly to the exclusion of Chinese, Japanese, Negro and Polynesian labor, not only from the land, but from employment in coastwise shipping, pearl-fishing and on overseas steamers holding mail contracts.

Australians point to America as a horrible example of an unmanageable mixture of races. They recognize that strict adherence to their policy will retard the economic development of the country, but they feel that no sacrifice is too great to make in keeping the colored races out. Such tropical sections as the northern part of Queensland are really suffering for the lack of cheap colored labor to develop their sugar and fruit plantations, since it has been found practically impossible to utilize white labor in these industries and compete with the prices of countries which do use yellow, brown and black laborers.

I can readily understand that the fundamental reason for the "White Australia" policy is economic rather than fear of the intermixture of blood. The Australian does not wish to lower his standard of living nor disturb the existing domination of "the laboring man," the center of power in Australian politics. For that reason discriminatory legislation is directed against Asiatics already in Australia. For instance, I found that in order to come under the restrictions of the factory laws one Asiatic constitutes a factory, while in most states six white people are allowed to work together without being so titled.

Knowing of the struggle there had been at the time of the forming of the Commonwealth to base the constitution on that of Canada rather than on that of the United States, I was interested in a study of that document as well as the way the

practical details of government were worked out. It was in this latter that I found the greatest points of difference from our own system. To an Australian, the federal, state and local governments are not primarily organizations to protect property and civil rights and maintain order; government, according to the Australian, exists in order to do the people's business.

The remedy for all public and private ills is legislation. The state governments fix hours and wages of labor; determine the conditions under which labor may be performed; operate railroads, street cars, ferry boats, electric light plants, telegraph and telephone lines, and mines; make clothes and man-

ufacture machinery; sell land, fish, meat, dairy produce, seed wheat; build fences and roads; provide insurance and lend money to individuals. There is no line of endeavor that may not be touched.

Only a few of these things are done by the federal government, however. The states have retained many powers which in this country we consider beyond their sphere. For instance, all taxation is in the hands of the state governments, as well as control

of the public lands and waterways. In some respects at least the states have refused to become submerged in the Commonwealth, just as the Commonwealth has refused to become submerged in the British Empire. Australia is not disloyal to the mother country, but she is independent, feeling that the Commonwealth owes its origin, but not its development, to England, and that it is a growing nation whose problems are peculiar to itself and must be solved by its own original methods.



In Australia they have much of "government business." They do not consider this an interference with private initiative. This street scene in Sydney suggests that government in business isn't fatal to municipal development.

CHAPTER III

AGRICULTURE AND MINING

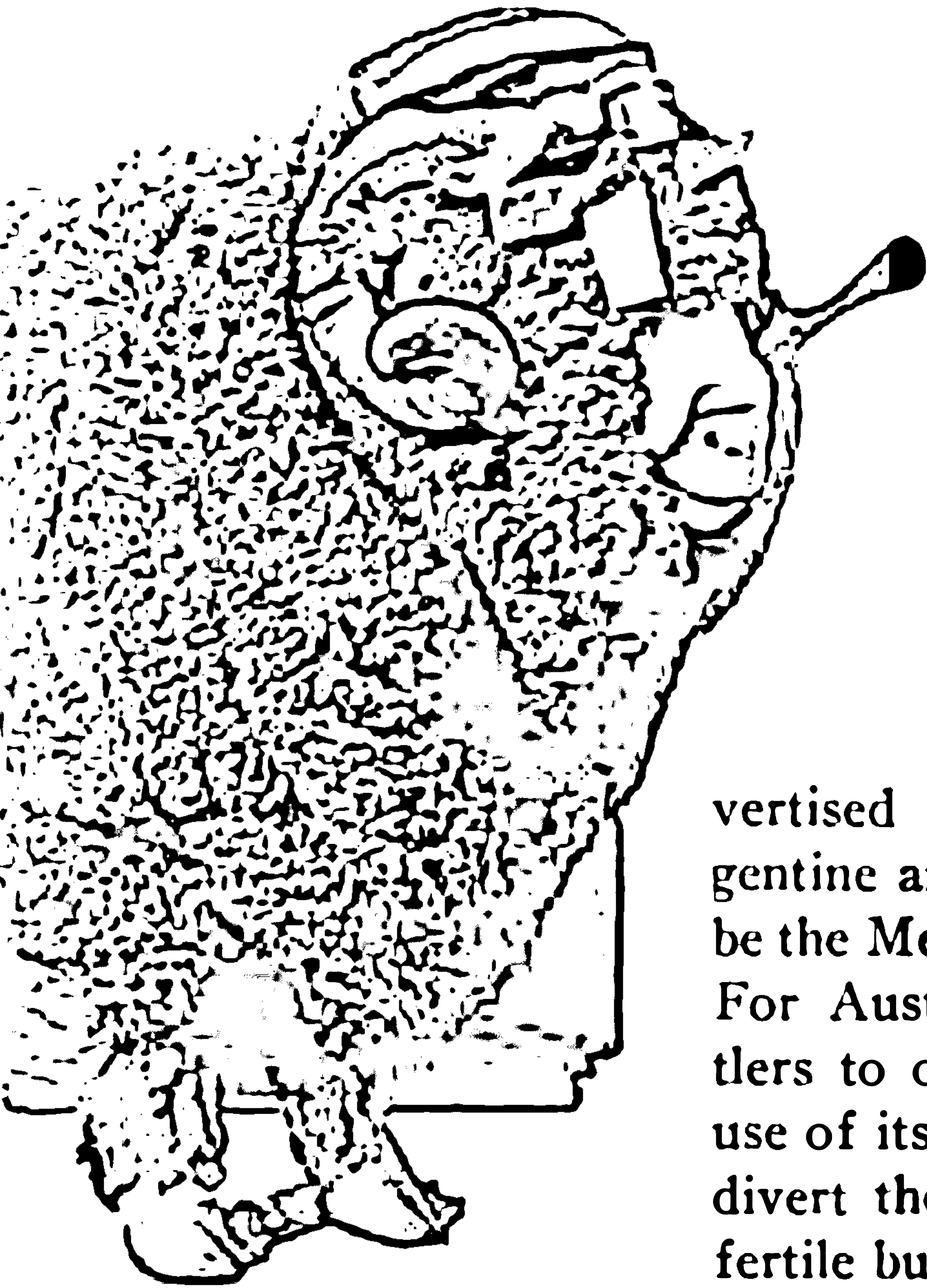
AUSTRALIA has a range of climate sufficiently varied to enable all forms of temperate, sub-tropical and tropical fruits and vegetables to be grown to perfection. Its soil is rich enough and its resources great enough to feed and clothe

at least a hundred million people instead of the five million it now possesses. Its natural wealth lies in its wonderful pastures, its immense flocks of sheep and herds of cattle, its forests of great trees, its mines and water resources.

It is the land of opportunity, and were it nearer the crowded centers of Europe and its resources as well advertised as those of Canada and Argentine and the United States, it would be the Mecca of the European emigrant. For Australia needs sturdy white settlers to open up its grain fields, make use of its forests, harness its rivers and divert the excess flood water over the fertile but now arid soil. Australia has millions of fertile acres to offer the wheat grower, the dairyman, the stock-

raiser and the horticulturist.

Australia maintains sixteen head of sheep and two head of cattle, and grows about thirty bushels of wheat, for each man, woman and child in the country. Every type of crop, from



A blue-ribbon Merino
ram.

pineapples, sugarcane, tobacco and bananas in tropical Queensland, to wheat, hay, barley, oats, corn, potatoes and all temperate fruits in the southern states, thrive to perfection. Only the fringe of the continent has been exploited and a mere fraction of its area cultivated, yet it probably produces more actual wealth from the soil per head of population than any other country on the globe. It is so rich on top of and underneath the earth surface that the forty per cent who live on the land support the sixty per cent who live in the cities.

The main element in determining the agriculture of a country is the rainfall. One-third of Australia, approximately one million square miles or 640,000,000 acres, has a rainfall of over twenty inches. This area is the coastal belt, and is the portion where intensive cultivation may be practiced. Next to this is a belt of over a million square miles with a rainfall of ten to twenty inches. The rest of the country, another third, or nearly that, has no rainfall at all, or less than ten inches, if any.

Of the 1,200,000,000 acres with a rainfall exceeding ten



Clearing a tract of "mallee" land in the Murray River country.

inches, more than 300,000,000 may be regarded as good wheat land. This would include no land farther north than twenty degrees south of the equator. If we assume that only one-fifth of this wheat land were cultivated and the yield averaged only ten bushels to the acre, this would raise enough wheat to feed the population of the United States.

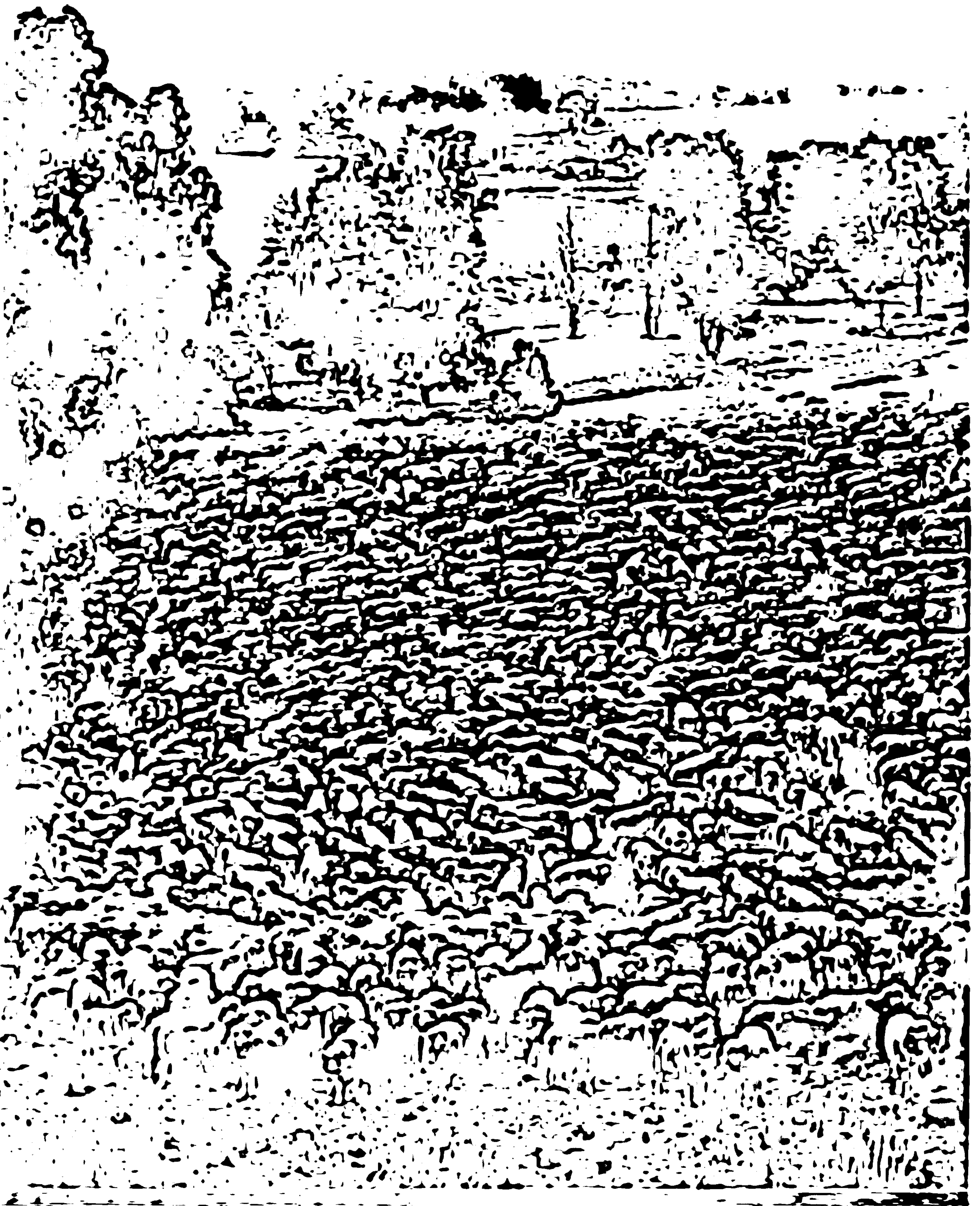
Owing to the climatic and economic conditions of this flat or slightly rolling country it is possible to produce wheat profitably at a very low price. Large labor-saving implements of every kind can be used to advantage. A multiple-furrow plow, turning over five to ten acres a day, drills doing ten to twenty-five acres, and a complete harvester and thrasher, which takes a strip of grain nine feet wide and drops out a filled sack, enables the man power of the farm to be used to the best possible advantage.

The climate is ideal, the stock requiring no housing in winter. The greater part of the rainfall occurs when most needed, from May to October—at a time when evaporation is slight.

The ripening period of the crop, from October to December, just opposite to our own, is dry and hot, thus enabling the wheat to mature rapidly, avoiding many diseases common to plant life. In the wheat belt of the United States, with the exception of part of the Pacific Coast, all wheat has to be cut with a reaper and binder and thrashed. The labor in handling the wheat crop under these conditions is very great, as well as the loss in the many handlings. But in Australia, one man with a team of three to five horses and a nine-foot harvester can take off comfortably from fifteen to twenty acres of wheat, bag it and have it ready for market in a day.

The crop is planted in successions, about five days apart and does not ripen all at once—one man can cut wheat for thirty days off the same field.

The methods of cultivation practiced in the wheat belt are characteristic of Australia, and the methods are adapted to the climatic and economic conditions of the country. In much of the wheat belt lack of moisture is the limiting factor for



Mustering sheep on



an Australian ranch.

success. To counteract this, long moisture fallowing is practiced. Sometimes nine or ten months are allowed prior to planting for fallowing. In some instances it is begun fifteen to eighteen months before planting. This conserves the moisture, placing at the disposal of the growing wheat the rainfall of two seasons.

It is estimated that one inch of winter rain is capable of producing one bag of grain, or two bushels. The fallows are usually prepared in June or July and worked thoroly thruout the summer months with a multiple-farrow plow, which covers from five to ten acres a day.

Practically all the varieties of wheat that are grown in the wheat belt have been developed in Australia. The most popular variety in the Commonwealth is the cross-bred "Federation," which was produced some twenty years ago. Australian soil, as are most soils south of the equator, is deficient in soluble phosphoric acid. The application of a small amount of superphosphate gives wonderful results. State agriculture reports show that from 100 to 150 pounds to the acre can be applied with profit. Consequently, the phosphate industry in Australia has assumed great proportions, and nearly 90 per cent of the wheat crop is now fertilized in this manner. The soil is rich in nitrates and needs no other fertilizer.

The rotation system used in the majority of cases is a three-course one, with wheat, pasture and bare-fallow. The average sized farm is about six hundred and forty acres, and approximately one-third is sown each year with wheat, one-third worked as a bare-fallow and one-third is put in grass or pasture for sheep. The average 640-acre farm, besides raising 200 acres of wheat, carries from 150 to 200 cross-bred ewes, which are used for the production of export lambs by mating with rams of the Downs breeds, such as Shropshire, Suffolk and Southdown.

Much of the wheat belt was formerly "mallee" scrub—the name given to areas where stunted eucalyptus grow. This is cleared by rolling with a heavy roller drawn by many oxen to break off the trees even with the ground, which then are

burned. The stumps remain, to be taken out at a more opportune time, perhaps. In the meantime the farmer plows with a specially constructed plow, used on ground of this sort, known as a "Jump" plow. Everything being done on an extensive scale, many teams are used on each plow, four to six-furrow plows most often being used. The cultivators are of two main types, disc and tine; the tine cultivators can cover fifteen to twenty acres a day. The skim plow often is used as a cultivator, especially for encrusted land.

When the crop is ready for harvesting it is taken off by reaper-thrashers, which cut off the heads or skin the grain out of the heads, and thrash, clean and sack the wheat, all in one operation. With the aid of these efficient machines, the Australian has been able to reduce the cost of production so that ten bushels to the acre pays him well.

The area sown to wheat in the Commonwealth fluctuated considerably during the war period, but the average is about 10,000,000 acres, with New South Wales having 3,000,000; Victoria, 3,000,000; South Australia, 2,500,000; Western Aus-



Sheep shearing approaches the dignity of a profession in Australia, some of the shearers earning as much as twenty dollars a day. This is a scene in a typical shearing shed.



An Australian wool store showing buyers appraising the wool.

tralia, 1,000,000 acres. The average yield is twelve and a half bushels to the acre, showing a steady increase in the last twenty years in spite of the utilization of the drier lands of the Commonwealth. Thus in Victoria the average yield for the first ten years of the present century was eight and a half bushels, while the next ten years averaged thirteen bushels.

State Departments of Agriculture have done much to foster improved methods of cultivation by judicious propaganda and by the establishment of experiment stations and private experimental plots on farms. The state of Victoria sent its Super-

intendent of Agriculture, A. E. V. Richardson, to the United States to look us over and see how we do things. Australia had heard wonderful reports about our "dry farming," but Mr. Richardson found that we had only copied his country's methods.

The seed is usually sown in April and May, the Australian fall, from forty-five to ninety pounds to the acre being planted, depending on the soil and the season. The wheat is all winter grown and is harvested during December and January, eight months later. June, July and August are the months of maximum rainfall in the wheat belt.

The wheat heretofore has been marketed in bags, but the government of New South Wales is erecting elevators, and their crop in the future will be handled in bulk, as it is in this country. Australian wheat has always been in great demand in the markets of the world because of its bright color and the quality of the flour milled from it. Australian wheat will undoubtedly always be able to compete with the rest of the wheat-growing countries, in spite of its distance from market, because of the great spaces available for wheat culture, the ease with which the land is tilled, and the highly favorable climatic conditions, which make possible the use of all kinds of labor-saving machinery. One man can do the work of two men any other place in the world.

Australia's present production runs as high as 150,000,000 bushels a year, but when the country is all settled 1,000,000,000 bushels is a low estimate of the possible production, which means that she can easily feed a population of a hundred and fifty million.

One of the remarkable features of Australian land, particularly the wheat land, is its recuperative power. During one of the ten droughts which have visited the country like a scourge since 1880, the black soil plains of the Darling were reduced to fine dust, without a vestige of herbage for miles. Within a week after the drought was broken they were covered with green and within a few weeks there was luxuriant pasturage. Not only that, but in New South Wales the fields which



The machine which harvests, thrashes and sacks wheat and enables one man to handle a large acreage. In the center picture a six-horse team is hauling a load of sacked grain from the harvesting machines.

during the drought of 1892 yielded some two bushels to the acre, the next year returned fifteen to seventeen bushels.

Apparently the farmers and stock raisers have the same recuperative power, for in this same drought New South Wales lost 17,000,000 sheep, yet by 1905 the number had increased from 23,000,000 to 40,000,000, and the number of horses and cattle had doubled.

Australia is the native home of the dry farmer, and land which elsewhere is considered hopelessly arid is here brought into profitable bearing. In fact, the very dryness of the climate is in some ways an aid to economical tilth, especially as regards the harvesting of the crop.

The dry climate is directly responsible for Australia's greatest single source of wealth—sheep. The merino sheep here reaches its highest stage of perfection. Not only has the average weight of the fleece been doubled since the first importation, but the quality of the wool is unrivaled. Millions of acres of land which otherwise would be without agricultural value are made to produce a dividend when pastured with sheep. Succulent native herbage growths on the driest of plains make up for the lack of drink, and the Australian sheepman has learned to conserve every drop of rainfall against the day of need. Merino sheep live and thrive on salt bush, pig werk and tar vine. These varieties of herbage carry about eighty-five per cent of water.

Other stock thrives, but for cattle and horses the coastal belt of greatest rainfall is most profitable, as cattle will starve on land where sheep find sufficient forage. Furthermore, in this land of great distances and few railroads, the problem of transport becomes a serious one. However, stock routes are laid out and tended as carefully as wagon roads or railways. They wind across the country, taking advantage of every known water supply. Streams, springs, "billabongs" and "gnamma" holes are used, for any liquid is acceptable in the desert. They live on what they pick up along the route.

When the distances for water are too great, artificial supplies are provided and guarded. Wells are dug, reservoirs



This is a wheat elevator near Adelaide, South Australia. Great mountains of sacked wheat are to be seen at almost all shipping points, and the dry climate permits storage with minimum protection from the elements.

built and "tanks" scooped out. Where other means fail, great skeleton buildings with immense roof areas are built to catch the scanty rainfall. In order to check evaporation often the reservoirs are placed below the surface and covered against the sun.

In New South Wales alone, 6,000,000 acres have been reserved for this purpose, and 700 public watering places have been constructed, three-fourths of them tanks and reservoirs. In South Australia, routes extend from Port Augusta to the borders of Queensland and Western Australia and into the heart of the Northwest desert for 700 miles. Western Australia maintains 2,000 miles of stock routes leading from inland stations to cities on the southwest coast.

All this is pretty hard on the railroads, but they are owned

by the government. But as the Italian fruit vendor said, "What I lose on the banan' I make up on the peanut."

Peculiarly identified with the agricultural development of Australia is the history of its metals. Step by step the agriculturist has followed closely after the miner; in many cases, in fact, the erstwhile prospector has laid aside his mining boots and pick and has taken up the plow. But, in any case, the farmer has come in greatest numbers to those districts where mineral wealth has been most abundant. For profitable agriculture depends to a great extent on close markets, and close markets mean population; the real growth of Australia truthfully may be said to date from the discovery of gold in the Commonwealth.

The first definite record of the discovery of gold is a note by James McBrien, assistant surveyor, made while making a survey of the Fish River between Rydal and Bathurst, dated February 15, 1823. Mention is also made in the early records of New South Wales of several other finds, but it was not until after the California fever of 1849 that real strikes were made in Australia.

Ballarat was opened up in 1851, and the following year



A panoramic view of one of the great steel works in Newcastle, which is the Pittsburgh of Australia.

gold was found in South Australia and Tasmania. In 1858 the rush had turned to Queensland, but it was not until a year later that paying fields were opened up. Kimberley, in Western Australia, was discovered in 1882, but it was six years later that this district was proclaimed a gold field. Another six years passed before the sensational strike at Coolgardie. At the present time the mines in Western Australia are the richest on the continent.

Probably no other country in the world contains so great a diversity of mineral wealth as does Australia. Among the many metals and metalliferous minerals found in the continent may be mentioned, aluminum, bismuth, antimony, manganese, platinum, tellurium, lead, mercury, wolfram, nickel, cobalt, iron, zinc, tin, copper, coal and silver.

Silver mining began in 1841, in South Australia, when the Wheal Gawler mine was opened. Since then silver has been found in all the states, either alone or in the form of sulphides, antimonial and arsenical ores, chloride, bromide and iodide and argentiferous lead ores. The bulk of the silver is found in the latter form. The largest mines are in New South Wales, the output of the other states being comparatively small. It is since 1882, when the famous Broken Hill mine was discovered, that the quantity of silver mined has been of any great importance. The Broken Hill field covers some 2,500 square miles of territory and has proved to be one of the principal mining centers of the world. It supports, in the desert, a city of 33,000 people, a privately owned railroad 250 miles long, and a smelter city on the coast with a population of 15,000.

It was in 1846 that copper ore was first exported from South Australia. Since that date copper mining has been one of the principal industries of the state. Since that time extensive mines and mining areas have been developed in Tasmania, New South Wales, Queensland and Western Australia, and it is known to exist in Victoria and the Northern Territory. Some of the best-paying mines are in Tasmania, where

is situated the Mount Lyell mine, the most prolific in the Commonwealth.

The fluctuation of the price of copper resulted in the closing down of many of the lower grade mines, but the recent revival of the price has resulted in the reopening of all but the poorest.

Tin was found during the first years of colonization, and it is to be found in all the states, but Tasmania contains the richest deposits, the Mount Bischoff mine there being the richest in all the Commonwealth. Queensland, Western Australia and the Northern Territory also possess rich deposits of ore which are being worked.

Iron is also distributed thruout the continent but lack of



Australia's steel industry, which centers in Newcastle, is being built up on a strictly modern basis. This is one of many blast-furnaces now in operation in Newcastle.

capital and of transportation facilities have held back the full development of this element. The successful handling of iron depends to a great extent on the proximity of coal, and as the two have not been found to any extent in the same district, the development of railroading is the key to the iron situation. Around Newcastle, for instance, have been found extensive deposits of coal, and it has been found cheaper to transport the iron ore to be smelted there than to reverse the operation. New South Wales contains the most mines in operation, as well as the most smelteries.

. Extensive deposits of iron ore have been found there in the Mittagong, Piper's Flat, Goulburn, Queanbeyan and Port Phillip districts. One of the most celebrated mines is Iron Knob, a veritable mountain of ore, containing, it is estimated, over 21,000,000 tons of high-grade ore, 66 per cent metallic. With coal deposits in the state estimated to total at least 115 billion tons, it is easy to see that the future of the steel industry is assured.

Until recent years the extensive zinc deposits have been given little attention except as the metal occurred with silver or other metals, chiefly lead and copper. In the Broken Hill mines a method was developed for the production of high-grade zinc concentrates, but elsewhere the use of the method was attended with little success. The introduction of dry magnetic separation plants has rendered production profitable and zinc bids fair to become an important metal. For years, the mining and reduction of zinc has been in the hands of Chinese miners, with the result that only the surface workings have been touched.

The bulk of the coal mined comes from New South Wales, altho it is also mined in Victoria, Queensland, Tasmania and Western Australia. It was first discovered in 1797 in New South Wales, at Coalcliff, on the coast to the north of Wollongong. Later in the same year Lieutenant Shortland, while pursuing some escaped convicts, discovered the coal beds at the mouth of the Hunter River. It was nearly thirty years, however, before mining really commenced. In New South



Mineral wealth in Australia is very great and diversified. Precious stones, silver, gold and the baser metals are found in paying quantities. The picture shows one of the larger tin mines in Tasmania.

Wales is also found a variety of cannel coal, known as kerosene shale, the production of which is assuming considerable proportions.

Salt is found in various parts of the continent, both in the form of rock salt and in the beds of dried or drying up inland salt lakes. Marble, limestone, granite and other building stones are found in various districts. The making of cement from the limestone is becoming an increasingly important industry. It is also used to a great extent in the reduction of ores.

Australia, particularly New South Wales, ranks high in the production of precious stones. Chief among those found

are the diamond, noble opal, sapphire, emerald and ruby. In New South Wales diamonds to the value of nearly a million dollars have been found, while noble opal of fully five times that value has been mined in the state. Sapphire mining is a paying industry only in New South Wales, altho the gem is found elsewhere.

It can readily be seen from the brief summary given that Australia bids fair to follow in the footsteps of the United States in becoming a self-maintaining country. From her mines and her fields, she is able to produce practically everything necessary not only for life, but for comfort and prosperity. All she needs in order to realize this condition to the full is population to develop the industries which will utilize the raw materials she is able to produce.

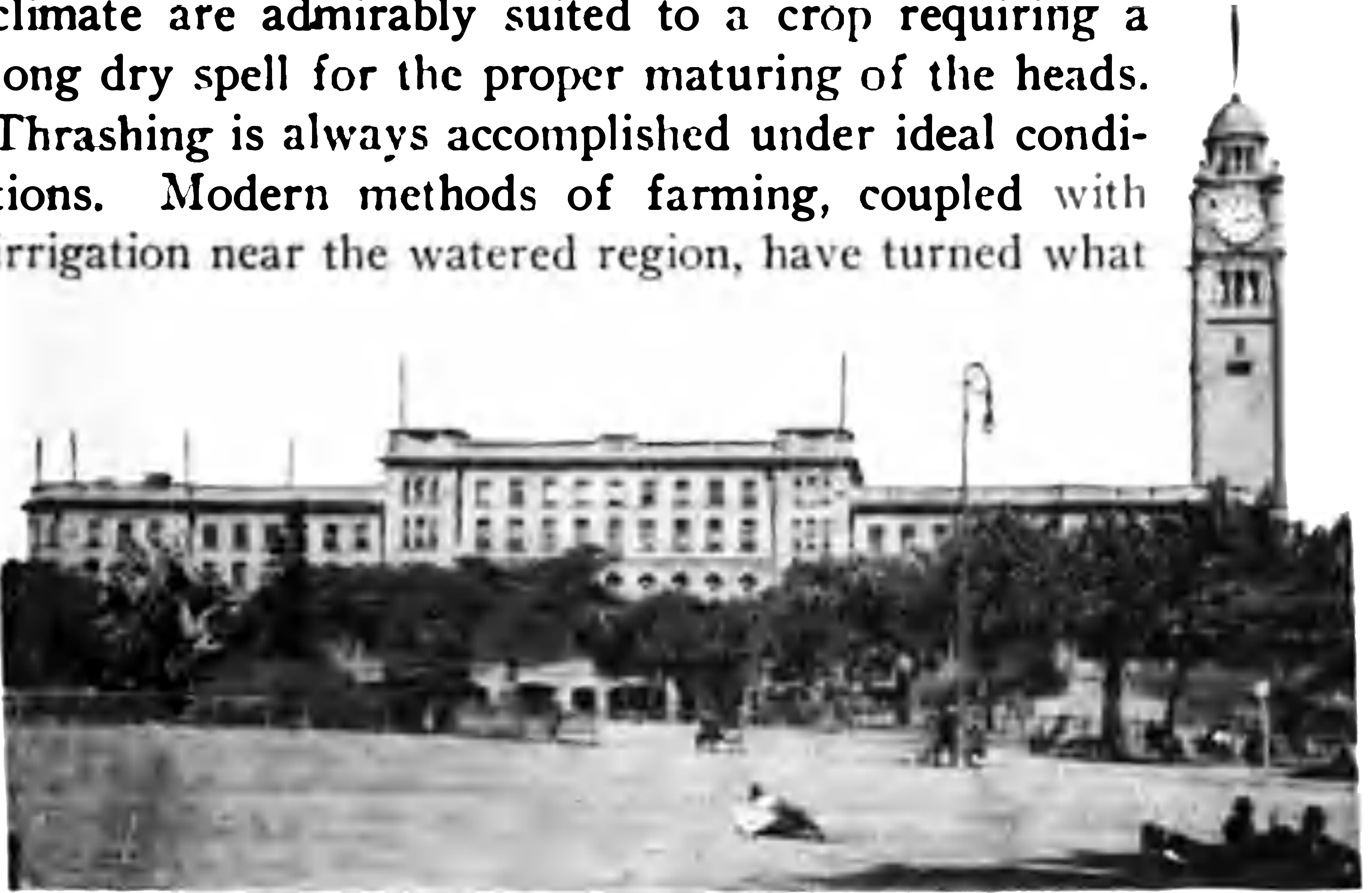


In a Victoria wheat field which yielded forty bushels to the acre.

CHAPTER IV

AUSTRALIAN INDUSTRIES AND TRANSPORTATION

THE basic industry of Australia, naturally, is farming in its various phases, agriculture, fruit-growing and stock-raising. Except in tropical Queensland, the raising of small grains, notably wheat, is the chief agricultural activity. The land and the climate are admirably suited to a crop requiring a long dry spell for the proper maturing of the heads. Thrashing is always accomplished under ideal conditions. Modern methods of farming, coupled with irrigation near the watered region, have turned what



Central railway station in Sydney.

was originally an arid expanse into prosperous, well-tilled holdings.

Portions which are too distant for irrigation, and where the rainfall is less than the ten inches annually said to be necessary for successful wheat-growing, are used to an increasing extent for sheep-grazing or are left unoccupied. It must be remembered that a section of Australia with an area greater than the United States west of Denver has a population of less than 5,000. This includes the true desert land of Australia

—if any of it can be called true desert, as the soil practically everywhere is fertile, or can be made so by the application of lime or superphosphates. All it lacks is the life-giving water, which is what the Texas man said Hell was short of.

In the region of plentiful rainfall, where the land is too broken for successful tillage, wonderful pasturage of sweet grasses is found for horses and cattle, particularly the latter. The dairying industry is becoming increasingly important, and the by-products of stock-growing are giving rise to many industrial projects.

Next in importance to farming in Australia is mining, in most districts the miner's pick having literally dug the way for the agriculturist. Certain it is that the material prosperity brought by the hidden wealth of the country has made possible



Australia has railroads in assorted sizes—wide, standard, and narrow gauge. This road up Mt. Morgan is a standard gauge, but it has three rails. The middle rail is cogged and it is used both for tractive power, as the engines toil up the steep grades, and for braking, when the train is coming down the mountain.



A modern passenger train in service between Melbourne and Albury on the Victorian railways. The passenger cars are built on American rather than European lines.

the slower development of other industries whose success depends upon closeness to markets and easy transportation. Mining has given rise to many other closely related industries. Wherever metallic ore is produced in commercial quantities are to be found ore reduction plants of various kinds. The government has installed many plants, chiefly in the gold fields.

Closely allied with both farming and mining is the lumbering business, which, however, has not been developed to any great extent in the Commonwealth, altho great forests of the finest hardwoods in the world cover—or have covered—practically all the great coastal belt. Like the United States, Australia has allowed the ruthless destruction of her timber. Great tracts have been bark-ringed to hasten the work of the elements, or burned over to prepare the ground for farming.

Practically all the trees are of the eucalyptus family, of which there are some three hundred varieties in the country. In Victoria alone there are sixty varieties, twenty of which are of commercial value. Not only is the wood used for lumber, but the bark is used for tanning, and from the leaves comes the eucalyptus oil, used so widely in medicine. From a ton of the bark of the gimlet tree, for instance, I learned that they obtain 416 pounds of tannin extract and 308 pounds of oxalic acid.

In spite of these great forests, however, Australia imports much of its dressed lumber, some \$10,000,000 worth a year,

while about half that amount is exported in the form of undressed hardwoods. I noted with surprise, altho I had often read the statement, that very little wood is used in the construction of houses, galvanized iron being the chief roofing material. The cost is one reason for this, but another reason is the depredations of the ants. A few varieties of native trees are proof against the boring of this pest, but none of the softer lumbers can long withstand its ravages. There is no pine or other timber that will float south of the equator. Small spruce pine trees from Canada, planted in Australia, grow into hardwood trees and three times the size they ever reach in North America.

Timbering should more and more become an industry of importance in Australia, for Australian hardwoods rival mahogany in beauty and susceptibility to polish, and are unsurpassed in strength, durability and resistance to fungous and insect attacks. As population increases, the establishment of mills for the making of dressed lumber and the organizing of factories for the making of furniture will become highly profitable ventures.

In fact, that is just where Australia stands today, it strikes me, just on the threshold of an industrial era. Up to now she has been largely concerned with the production of raw materials. Practically all her exports of the past have been in the undeveloped state. Her wool is shipped to the spinning mills of England; her untanned hides have been exported, to be brought back in the form of shoes and leather goods. Here and there over the Commonwealth are springing up little enterprises to turn raw material into finished products, and as man-power and capital are available, the country is destined to take a great stride forward.

You will read in the chapter on New South Wales how the city of Newcastle is being called "the Pittsburgh of Australia," because of its growing steel plants. Already that steel is being transformed into farm implements, tools, machinery, steel rails and all railroad appurtenances. There are seventy-three government railway and tramway workshops, turning



Three types of car equipment used on Australian railways. At the top is a T. A. M. car, which corresponds to our Pullman. The center is a wooden tank car. The bottom picture shows how sacked grain is transported in open-top cars. Australian freight equipment is of lighter construction than the freight equipment on American roads.

out rolling stock in excess of \$25,000,000 yearly. For this purpose some steel is still imported, but the amount since the war has shrunk to almost nothing. It is just a matter of a few years till Australia will be competing in the steel markets of the world.

Prior to 1851, there were no manufacturing establishments worthy of the name in Australia. In 1914, at the beginning of the war, there were 15,500 separate establishments, giving employment to 337,162 workers, and during the previous year, 1913, goods to the value of more than \$300,000,000 were manufactured. Practically every variety of product was represented.

Since the war there has been a slight period of readjustment and a consequent depression, for Australia has suffered in this respect in common with the rest of the world. But already a healthier tone is creeping into industry. The war has had at least one beneficial result. Formerly there existed a considerable prejudice in the Commonwealth against home-manufactured goods. "Made in Australia" was accepted pretty generally as a mark of inferiority. The great bulk of finished products came from Germany—in fact, Germany and German citizens held a monopoly on the mineral production of the Commonwealth.

The war put a stop to that, and the Australians, thrown on their own resources thru the interruption of transport facilities, have found that they have not fared so badly after all. Confidence in home-manufactured articles has had a most salutary effect on the establishment of new industries and capital is more freely available than at any time in the past.

Australian manufactories, however, have still one more handicap to overcome. That is the question of labor. In the chapter on the Australian government I have tried to make clear the relationship of the state to the people, how the individual feels that government must do more than govern. The average Australian feels that every political, social and economic ill can and should be solved by legislation. The government is constituted, in other words, to do the people's business.

At present the Labor party is in control, and the labor unions constitute the heart of the party. So the unions practically control the executive, legislative and judicial machinery of the cities, states and the federal government.

As a consequence, practically every detail of wages, working hours and working conditions is prescribed by statute. The Australian worker, as a whole, works shorter hours for higher pay than any other laborer. In fact, it was in Australia that the "three sacred eights" were first promulgated—"eight hours work, eight hours sleep, eight hours play."

The recognized maximum for a week's work is forty-eight hours, tho in some industries thirty-six hours is considered full time. In most of the building trades forty-four hours is the standard week, and it is probable that this figure will ultimately



The State Railways' report asserts that Queensland owns thirty miles of "narrow gauge" railway. Elsewhere in the world a railroad three feet six inches in gauge is standard narrow gauge. That is the widest gauge in Queensland and the narrow gauge lines are two feet wide. For the most part, they operate in the sugar cane districts, where diminutive engines pull low trucks loaded with cane from the fields to the mills.



Western Australia government railway workshops at Midland Junction.

come to be recognized in all lines. Even the stores are compelled to abide by this government regulation. They are forced to close at six p. m. on four days of the week, remaining open to nine or ten on one day and closing at one o'clock on Saturdays. Sundays they are closed all day. Only drug stores, saloons and restaurants are exempt from this rule.

The theory of the minimum wage is in practical application. The cost of living is recorded in detail by specially created boards, and their findings furnish the basis for awards in industrial disputes, of which there are many. A living wage is defined as that which will enable a worker of the class to which the lowest wage would be paid, to maintain himself, his wife and two children in a house of three rooms and a kitchen, with food, plain and inexpensive but sufficient in quantity and

quality to maintain health and efficiency, and with an allowance for fuel, clothes, furniture, utensils, life and accident insurance, union pay, books and newspapers, train fares, amusements and holidays, intoxicating liquors and tobacco, sickness and death, domestic help, religion and charities.

Many industrial boards and courts have been established with the purpose of adjusting misunderstandings between employers and employed, but with only indifferent results, as I discovered by an investigation of the statistics. Since the Industrial Arbitration Act of 1912 an increasing proportion of "industrial dislocations," as they are called, have been fought out. In part, this condition is due to the fact that the docket of the labor courts is overloaded, but in larger measure it is due to the fact that the courts are unable to enforce their awards except those against employers.

This condition makes arbitration a very one-sided affair and justice can hardly be said to be served. In the period of increasing wages the courts were very popular with the workers, but now that the peak has been reached, the workman is beginning to echo the sentiment long entertained by the employer, and in the future some other expedient will have to be brought into use if the industrial prosperity of Australia is to continue.

In fact, like the rest of the world, the Commonwealth of Australia has reached its period of readjustment, when a new conception of the relationship of labor and capital must be gained or the industrial structure of the country will fall into chaos. The situation there is aggravated by the abnormal condition of the country. It is an agricultural and pastoral nation, yet the bulk of its people live in the cities, which are growing three times as fast as is the rural population. This means a corresponding increase in the number of people engaged in manufacturing and mercantile lines—and more chance for labor legislation.

It has been said that the measure of a country's industrial progress may be taken in railroad miles. If that is the case, then Australia surely has progressed in the few years of its

history. Yet it is still only at the beginning of things. With an area greater than that of the United States, it has 26,308 miles of railroad, less than one-tenth the mileage in this country.

Furthermore, there is no uniform gauge.

One might jump to the hasty conclusion that, in the matter of railroads at least, the United States is ten times as progressive as Australia. However, when you bear in mind that the population of the Commonwealth is only 5,000,000, while that of the United States is more than 100,000,000, you might easily decide that, man for man, Australia is twice as progressive.

The fact of the matter, all comparisons aside, is that Australian railways have been developed under the greatest handicaps. Long distances thru sparsely populated districts, great stretches of waterless desert, coastal mountain ranges that shut off the interior, lack of material for construction, all these and more had to be overcome. Added to these was the early self-sufficient attitude of each of the six states. Each was jealous of its neighbors.

The struggle was the most intense between the two most



Mr. F. M. Whyte of New York, formerly of Chicago, the American engineer appointed to the Royal Commission which outlined a railroad construction program for Australia and recommended four feet eight and one-half inches as the standard gauge.

populous colonies, New South Wales and Victoria—between the cities of Sydney and Melbourne, really. Victoria built railroads to and along the border of New South Wales and agreed to carry wool and produce of New South Wales origin to Melbourne at cost. Then New South Wales made ridiculously low rates from points in Victoria to Sydney. Queensland and South Australia also indulged in suicidal rate-cutting.

One disastrous result of this rivalry was the desire to build rapidly at the expense of future needs. Each state solved its railroad problems in its own way and without regard for the interests of its neighbors, fearing, indeed, that in serving its own ultimate good it might inadvertently benefit its neighbor. The first railroads, built in most cases by private enterprise, were planned to fit only local conditions. They were short-line roads, frequently narrow-gauge. As the states took over these roads they carried on the plans as they had been begun.

The result is that while the railways of New South Wales are of world standard gauge, four feet eight and



Mr. Harold W. Clapp, Chairman of the Railway Commission of Victoria, was trained in the United States. He was a construction engineer for the General Electric Company with the Southern Pacific system, and, one time, a Vice President of the East Louis & Suburban Railways. Fifty years ago his father and mother went to Australia. His father owned the first street car line in Melbourne.

one-half inches, Victoria has a gauge of five feet three inches, Queensland and Western Australia railroads are narrow gauge, three feet six inches, and South Australia has all three widths. As a consequence, a passenger landing at Brisbane, on the northeast coast, must change to a different type of car five times in riding to Perth, 3,476 miles. Even between the two largest cities, Sydney and Melbourne, 582 miles, no thru cars can be operated.

The Commonwealth has now undertaken the tremendous task of linking together the differing elements of this patchwork transportation system. The first step obviously is to standardize the gauge, and many mechanical expedients have been suggested and tried out, including slip-axles and the laying of a third rail. But nothing short of relaying the track standard gauge will solve the problem for good. This is no easy matter, as it entails expense in no wise warranted by the present earnings of the roads.

At the present time most of the railroads are still state owned. Up to June, 1920, 1,732 miles of standard gauge rail-



A view of the extensive railway shops and switching tracks near Sydney.

roads had been built and was being operated by the Commonwealth—at a loss, of course. Most of this is comprised in the Trans-Australian Railway, 1,051 miles in length, stretching from Kalgoorlie to Port Augusta.

The building of this road was unique in the history of railroading. The line was laid out by compass. There are no tunnels, no steep grades, and few bridges or culverts are required. In all its length no permanent body of water is crossed. There is one stretch of three hundred miles without a curve—certainly, a record in continuous straight track.

The Great Desert of Australia divides the country into two distinct parts, and Western Australia is as completely isolated from its neighbors as if it were a separate island. Until the building of the Trans-Australian there was no land communication between this state and its nearest neighbor except by telegraph, and the boat journey from Perth to Sydney requires seven days on fast steamers.

Probably the most remarkable feature of the railway is its location in a region uninhabited even by aborigines and where the ordinary engineering problems of grading and track-laying were secondary to the providing of water. In fact, one of the most difficult of the tasks attending the building of the road consisted in establishing depots of water and fuel. The preliminary surveys were conducted by means of camel transport. Then well-boring outfits were dragged across the sand by means of camel trains of fourteen or sixteen. Catchment basins and shallow wells were dug, but in the actual construction work, chief reliance was placed on tank cars hauled hundreds of miles over the new track. At certain points during the construction period water sold at two dollars a gallon.

For a long time, at least, there can be no hope that the Commonwealth railways will pay a dividend. There is no doubt, however, that increasingly they will play a prominent part in the industrial development of the country. In time of war the strategic value of thru-by-rail transport can hardly be calculated. But for neither military nor commercial purposes can the project hope for any great measure of success until it is



The suburban station at Stanmore on the New South Wales Railways. These stations are kept up in a way that would open the eyes of the railroad managers in the United States. Station grounds resemble a public park.

possible to ship from coast to coast without reloading, which the present break of gauge now makes necessary. Not only is the cost of such shipping made prohibitive if carried by the shipper, or a source of loss if carried by the government, but it means that it is practically impossible to ship livestock or any perishable goods under present conditions.

In September, 1921, a royal commission appointed to investigate the feasibility of early standardization reported favorably on the four feet eight and one-half inch gauge, and with the proper co-operation between the federal government and the individual states, there is no reason why the work should be long delayed. The commission, appointed by the Premier of Australia, included two engineers, one an Englishman, the other Mr. F. M. Whyte of New York, formerly of Chicago. The rivalry and ill-feeling which stood in the way of standardization in the early days has been gradually disappearing since the forming of the Commonwealth, and there seems now a genuine desire to get together on this vital problem. The

building of the Trans-Australian railroad has been a great incentive toward a better understanding, being both a moral and an object lesson as to what can be accomplished.

This changing attitude I found well represented in the views of the newly appointed Chairman of the Railway Commissioners of Victoria, Harold W. Clapp, who had his railroad training in the United States. I found in him a broad-gauge executive who has very distinct ideas as to the value of standardization as well as unification. Mr. Clapp spent seventeen years in close contact with traction problems as construction engineer with the General Electric Company, the Southern Pacific and the East St. Louis and Suburban Railways. His experience has been with both steam and electric roads, so his viewpoint is necessarily broad. Commissioner Clapp attacks the break of gauge difficulty with characteristic American directness. "Unification," says he, "is



Another type of suburban station on the New South Wales Railways. The cleanliness of the station and environs is a noticeable and attractive feature.

the only satisfactory solution. Third rails, adjustable axles and all such expedients are inadequate, both from a technical and from a broadly national point of view."

In the last few words, "a broadly national point of view," is the keynote to Mr. Clapp's attitude, an attitude which will take the railroads out of state politics. For in Australia, as in the United States, during the last few years the railroad problem has threatened to become a political one as well as an industrial one. And Australian politics, I have found, are already in a sufficiently muddled state.

There is no alternative to railroad transportation, as there might be in countries with waterways capable of development. The rivers of Australia amount to little from a transportation standpoint. Part of the year most of them are only a series of connected ponds and in flood time they are un-navigable torrents or spread over a vast expanse of the flat lands. And for hundreds of miles there are no rivers of any sort.

With more than 12,000 miles of coast line, Tasmania included, and with vast stretches of interior presenting extraordinarily difficult transportation problems, it was but natural that the first and chief development of this Lonely Continent should be in the coastal regions and that water transportation, both between communities in the littoral and between the continent and foreign lands, should play a major part in commerce. Organized coastwise shipping dates from 1851, when the steamer *Express* began to ply regularly between Melbourne and Geelong. The first regular interstate service was organized by a company in Tasmania and carried passengers and freight between Hobart and Melbourne. These operations began in 1852.

The gold rush and the attendant rapid increase in population gave an impetus to this coastwise shipping. In 1862, regular boat service was established between New South Wales and Victoria. In 1875, service was inaugurated between Adelaide and Melbourne, and thereafter the coastwise trade devel-

oped rapidly. By the end of 1915, twenty-three companies were engaged in this service with a ship tonnage in excess of 200,000 tons.

In interstate shipping New South Wales and Victoria lead, with Tasmania a very creditable third. The total number of vessels entering and clearing in the interstate traffic in the year 1918-19 was 9,615. Of this total 2,863 entered or cleared from ports in New South Wales, while the total for Victoria was 2,608.

The total overseas tonnage entering and clearing Australian ports in 1913, a year that is a fair index to normal commerce, was 10,601,948 ship tons. This is about one-seventh of the



The modern elevator rapidly is making its appearance in the chief shipping centers. This giant grain reservoir is located at White Bay, Sydney.

total for the United States, one-sixth of the total for France, and is practically equal to the tonnage entering and clearing the ports of Norway in a year.

Naturally, the major part of Australia's oversea commerce is with Great Britain and her colonies. Of the colonies, New Zealand sends in the most freight. The ship tonnage entering Australian ports from the British Empire in 1918-19 was 2,308,393. The ship tonnage entering from the United States in the same year was 432,430, and from Japan 148,436. Germany, before the war, was a factor in this trade, but the British Empire always has been, and probably always will be, favored with the greater part of Australian commerce. During the year in question 77.24 per cent of the ship tonnage entering and clearing Australian ports was British.

Australian owned ships are an ever increasing factor in overseas commerce. From 1904 to 1908 but 7.70 per cent of the overseas tonnage was handled in Australian bottoms. During the next five years it increased to 8.32 per cent, and in 1918-19 it was up to 13.85 per cent.

The Commonwealth owns and operates many ships both of steel and wood, which are built in government owned docks. The building program formulated just before the war called for twenty-four steel ships and twenty-four wooden ones. While the war interfered with this program, most of the steel ships have been built and a few of the wooden ones. Most of these are combined passenger and cargo boats, about 520 feet long, to carry about 12,700 tons dead-weight, with a speed of fifteen knots an hour. The "wind-jammer" or sailing vessel still plays a very important part in Australian commerce, both between the several states and between the continent and Asiatic ports. The three-mast vessel, equipped with auxiliary propelling machinery, is a popular craft and economically handled. Among the chief Commonwealth navy yards are those at Williamstown, Walsh Island and Cockatoo Island. The fact that the Commonwealth engages in these activities does

not prevent private individuals and companies from entering the field.

Melbourne and Sydney are the chief ports when judged on the basis of ship tonnage entering, the annual total for each being greater than 5,000,000 tons. Newcastle, Fremantle, Brisbane and Adelaide rank in tonnage in the order named.

According to the latest official figures from the Commonwealth, her exports to the United States in 1918-19 were valued at approximately \$45,000,000, about one-tenth of the total exports to all British countries. Imports from the United States approximated \$140,000,000 in value, a little more than one-third the total value of imports from all British countries. Our trade with Australia is in finished products mostly. We send more than \$15,000,000 worth of paper to Australia annually; about \$15,000,000 worth of machinery, machine tools, typewriters, sewing machines, etc.; and more than \$12,000,000 worth of oils, fats, gasoline and kerosene.

The tariff system operates in favor of the British Empire, and while, in the main, tariff rates are not as high as in the United States, the Commonwealth extends a reasonable protection to Australian industries and business.

Australia has an efficient navy, altho it is not as large as one might consider expedient for a country with so great a coast line. It is made up of thirty-two ships of all classes and seven submarines. The battle cruiser *Australia*, 19,200 tons displacement, is the largest and most formidable war vessel. Light cruisers and torpedo boat destroyers predominate. Since the visit of Lord Jellicoe in 1919, the Australian navy is being developed in harmony with the naval plans of the British Empire, and is, in fact, a far-Pacific unit of the British navy.



Australia furnishes us with that missing link between modern plant and animal life and that which prevailed when the human race was in its infancy. Much of the plant life is not duplicated elsewhere in the world and the marsupial animals are singularly products of the Lonely Continent. It seems that this vast area must have been cut off from other lands many ages ago and the climatic conditions were such that the plant and animal life, long since extinct in other countries, was preserved. The opossum is the only marsupial animal found in the United States, while almost all the animals native to Australia have the pouch in which their immature young are carried until they can fend for themselves. Of these, the kangaroo is most widely known. A female kangaroo, with her offspring looking out on the world from its pouch cradle, is shown in the picture.

CHAPTER V

THE STRANGEST ANIMALS IN THE WORLD

THE UNITED STATES has at least one natural link with Australia—perhaps he recognizes it in his fondness for the almost-national song, “Dixie,” for that link is the opossum, famed in Southern plantation song and story. The opossum is the only living pouched marsupial outside Australia.



The koala is Australia's one member of the r family. It is about the size of a black r cub and looks more like the “Teddy Bear” of the nursery than a real animal.

kangaroo rats and mice, yet which have all the kangaroo characteristics except in size.

The “red” kangaroo of the inland is just as likely to be



The kangaroo is one of Australia's best advertisements. They are found in all parts of the continent and average about five feet in height. When cornered the kangaroo puts up a real fight, striking viciously with his hind legs. He is the largest of the pouched animals.



Twenty varieties of the wallaby are found in Australia. They are small kangaroos, found in the swamps and foothills.

bluish in color. This is the kind formerly hunted by dogs and providing great sport, as when brought to bay the kangaroo is a plucky fighter, either backing up against a tree or taking to the water. While in the water he is more than a match for the dogs, who are compelled to swim. He catches the dog with his forelegs, which are not so weak as they look, and rips him to ribbons with the long, dagger-like nail of his central hind toe.

The kangaroo in captivity has been taught to box, but he prefers kicking as a means of defense, using the hind leg with great force. When he stands erect his long, heavy tail is used as a balance, giving great power to his jump and acting as a counterpoise. He clears a high fence easily and has been known to leap sixty feet forward. At a leisurely gait he looks awkward, but at full speed he appears graceful beyond description.

There is one variety which is a fine climber, the Boongarry tree kangaroo. He lives and feeds most of the time in the tree-tops, leaping as agilely as a monkey from limb to limb.

The wallaby is more often found in the swamps or in the

rocky foothills, while the big kangaroos frequent the plains country. It is from the wallabies that most of the leather and fur is obtained.

Australia has but one member of the bear family, a curious little creature about the size of a young black bear cub, known as the koala. Its fur is gray, with whitish underparts, feet and ears. It has cheek-pouches somewhat like those of the chipmunk, for the storing of food. While not easily domesticated, the koala is far from ferocious. He feeds at night, on roots and leaves, sleeping in a tree during the day. The mother koala has a pouch for her baby bear—there is only one cub at a time, born in the spring—and in this pouch it is carried until old enough to travel by itself, tho along toward the last it prefers a seat on its mother's back, holding tightly to the fur of her neck. The baby koala has a cry much like that of a child, and on windy nights it can be heard high in the treetops, soothed by the deep voice of the mother much in human fashion.

There is another Australian animal which has been given the name of the native bear, but its true name is wombat. It is like the koala in some ways, but not much like a bear, being small, heavy and short-limbed, with front teeth like those of a rat, for it is a gnawing animal. It also is a burrower with long and powerful claws on its feet. The wombat also has a pouch for its young.

Tasmania has at least one animal peculiar to the island, but the Tasmanians take little pride in it. It is the Tasmanian devil, an untamable bundle of ferocity now practically extinct. In size it is about the same as a wolverine, which it somewhat resembles in habits. It is black and shaggy, with a head out of proportion to its body, and with jaws and teeth strong enough to crush big bones. It lives in a burrow like a badger, prowling forth at night, a menace to poultry and smaller livestock.

Queerest of all animal life in Australia—in the world, perhaps—is the platypus, or ornythoryncus. It has the fur of a seal, feet that are as much flappers as claws, is web-footed, yet burrows cleverly with its awkward-looking extremities,



Here is one of the most interesting enigmas of the animal world. The platypus is at home on land or in water, it lays eggs but suckles its young and carries them in a pouch. This "room and board" arrangement leaves little to be desired in the way of accommodations by the young.

Has the bill of a duck, and lays eggs, yet suckles its young. Surely a bundle of contradictions is the platypus!

Hunting and feeding in the water, it sleeps out of it in a burrow, the mouth of which is under the water. It feeds only at night, puddling the soft banks and weed beds in exactly the same way as a duck fossicks in the mud of a pond. Altho it has no external ears, it has a keen sense of hearing, and the hunter finds it hard work to creep upon it unawares.

Recently, investigators have discovered in the platypus some glands which are of interest to the medical profession, and on a reservation near Melbourne these strange creatures are being artificially bred for purposes of research.

The spiny ant-eater vies with the platypus in being sole survivor of the lowest order of mammal life, the monotremes. Like the platypus, the spiny ant-eater lays eggs, which are

hatched in a pouch, where the young are raised on the mother's milk. The body of the spiny ant-eater is short—fifteen to eighteen inches—but it is broad and carried by strong, short legs terminating in big claws, which are used in tearing open ant-hills and other hiding-places of the ever-present Australian ant. The head is small and is prolonged into a slender snout covered with a moist black membrane. The tongue also is long and slender, the mouth being without teeth, tho the palate is armored with small curved spines. It lives in burrows, feeding on ants, which it captures like all other ant-eaters, by means of its sticky tongue. The upper surface of the head and body of the ant-eater are covered with a mixture of short hairs and stiff spines. When danger threatens it curls up like a hedgehog.

But not all the queer creatures of Australia wear fur. Among the feathered members, numbering over 1,200 species, there are many to be found nowhere else. Among these is the emu, sharing with the kangaroo a place in the national coat of arms.



Australia's national bird is the emu, which shares with the kangaroo the honor of appearing on the coat of arms of the Commonwealth.

It is a rover of the open plains, ranging to six feet in height, practically wingless and covered with gray-brown feathers, so fine that they look like hair. Until a few years ago it was being mercilessly killed off for its skin and for its eggs. The eggs, a beautiful myrtle-green in color and measuring about six inches in length, were much in demand for use by jewelers for the making of presentation cups and trophies.

The emu lays from eight to sixteen eggs in a nest, each of them weighing about twenty ounces. Altho so large, they are

singularly delicate in flavor. The emu always lays its eggs by night and in the winter, the male bird sitting on the nest by day and otherwise acting the part of guardian and brooder. Fortunately, Australian sentiment has changed, and the destruction of these noble birds has been stopped.

There are two birds, the lowan, or mallee hen, and the brush turkey, which, altho separated by the whole continent, have hit upon the same labor-saving device. To them belong the credit for the first use of the incubator. The lowan is found in the southern part of Australia, in the mallee lands, country covered with a kind of scrub eucalyptus.

These birds scratch and scrape the light, sandy soil into conical heaps, using their feet, wings and breast for the work, until they have a circular mound some twelve feet in diameter and from two to four feet high in the center. In the beginning of the nesting season the middle of the mound is hollowed out until the natural level of the ground is reached. Here they pack in wet leaves and other vegetable matter, the slow fermentation of which supplies the heat with which the eggs are hatched. The eggs are laid four in a layer, always set in position with the pointed end downward. When the layer is completed it is covered lightly with sand to a depth of several inches, and another layer begun, an egg each third day. Sixteen in all are laid. Then the mound is covered over and rounded off, but about ten o'clock each morning the parent birds flatten out the crest of the mound, building it up again at night.

As soon as they leave the shell, the young birds, with a constant downward movement of the feet, push their way out of the sand, beginning at once to forage for themselves. They are able to fly as soon as they are hatched. The full-grown birds are a mottled brown in color and about the size of a domestic hen turkey.

The brush turkey, co-originator of the incubator method, is found only at the northern edge of the continent. With the exception of the breast, which is a bright yellow, it bears a striking resemblance to the American bronze turkey, having



An ostrich herd.

the same shape and the same red, fleshy wattling of the head and neck.

The brush turkeys use rotted leaves and wood mould for the building of their egg-mounds, which are otherwise much like those of the lowan, tho they scratch a separate hole for each egg. From twelve to eighteen eggs is the full nest, but frequently more than one pair of birds will use the same mound. The outside of the mound is usually dry leaves, so that it requires less attention than that of the lowan, tho the male bird frequently tests the temperature, which remains fairly steady at ninety-six degrees.

The chicks remain in the mound for about twenty-four hours after they are hatched, during which time they free themselves of a film-like sheath that protects the wings when they leave the shell, which they do not chip, shattering it instead with a sudden strong wriggle when they are ready to leave. Like the young lowans, they are ready to take care of themselves at once, flying to a convenient perch as if they had known how for months.

As curious in its own way as either of the lowan or the

brush turkey is the second largest bird of Australia, the cassowary. It is quite as heavy as the emu and stands fully five feet high when erect. It is jet black in color, covered with feathers so fine they look like coarse hair. The head and neck are bare, with turkey wattles and neck bells of blue and red. It has a kind of helmet, an enlargement of the bone of the skull covered with a horny substance. It is a quarrelsome bird and when its anger is aroused it makes dangerous use of its wings, which are equipped with five pointed spines, the middle one a foot long.

The cassowary is found only in the narrow coastal belt of northern Queensland, where it lives in the dense, jungle-like forests, finding its favorite food in the fruit of the paw-paw tree. The bird's scientific interest lies in the fact that it is doubtless one of the survivors of a giant race of birds that were contemporary with the extinct moa of New Zealand, the largest bird of which we have any record since the coming of man.

Probably no traveler has ever visited an Australian forest without having been startled out of his wits by a sudden peal of laughter greeting him from the treetops. His feeling of consternation soon changes, however, when he learns its source ;



Brush turkey.



Stubble quail.



Magpie goose.

Wood duck.



Lowan, or mallee hen.



Topknot pigeon.



Mutton bird, or sooty petrel.

it is the kooka burra, or "laughing jackass," a feathered comedian who has won the affection of the Australian people by his whole-souled, ringing, rollicking laugh, changing from shrill to guttural and taken up by one bird after another till the bush echoes with it. He belongs to the kingfisher family, and he has an appetite as wide as his laugh, his diet consisting of fish, insects, small lizards and snakes. He is probably given more credit for killing snakes than he deserves, and he is a destroyer of young birds, both in and out of their nests, but if you were to shoot a "Jack," as he is affectionately termed, you would probably be lynched by the indignant Australians, who shut their eyes to his faults for the sake of his jovial company.

The birds of Australia are legion, and they are noted for their beauty as well as their economic value. There is the lyre bird, famous for its beautiful plumage, notably its harp-shaped tail. Not so well known to outsiders is its wonderful mimicry



Cassowary, a jungle bird that is as heavy as the emu but more stockily built and with a more warlike disposition. Its helmet is formed by an enlargement of the skull bones and is covered with a horny substance. In combat, the cassowary makes good use of its wings, each of which is furnished with five pointed spines.

—it is the one mocking bird really worthy the name. Then there is the bower bird, building itself a playhouse of grasses and bringing to it all manner of shells and stones and bright bits. Thirty species of wild pigeon make their home in Australia and there are several varieties of geese and ducks, wild turkeys, penguins, and game birds galore, which come to their haunts in thousands, providing great sport for hunters.

The smallest of the game birds, the quail, is also the most popular with hunters. There are some ten species, but the stubble quail is as widely distributed and as well known as our "Bob White" is in the United States. A day's quail shooting over setters is a compliment which every hospitable landowner likes to offer a visitor who can handle a gun. As the Australian quails are not migratory, and as the stubble quail lays twelve eggs to the nest and raises more than one brood to the year, the hunter is usually assured of good shooting.

No list of the birds of Australia would be complete without mention of the black swan, emblem of the state of Western Australia and typical Australian water bird. Its flesh is accounted too rank for table use, so it is not truly a game bird and is now seldom shot. It is widespread, frequenting sea inlets as well as inland swamps and lakes. With its red beak, ruby eyes and white wings, bright touches of color in its slate-gray plumage, it is a picturesque life note of the water-



The "Laughing Jackass," or koo burra, is a popular bird in Australia. He belongs to the kingfisher family.



The black swan, a typical Australian water fowl. This bird is used on the emblem of Western Australia.

side, where amongst reeds and rushes it builds its nest of boughs and lays from four to eight eggs in a clutch. The black swan takes very kindly to captivity, so it is pretty well known the world over.

Swans always change ground at night to escape the attentions of the wedge-tailed eagle, which Australians assert to be the greatest eagle on earth, a claim fully justified in span of wings, the measurements in many specimens being as high as eight feet.

Australia has one form of animal life of which its people are not particularly proud, and yet in this particular respect the continent leads the world. I refer to the snakes. Only four species are really deadly, yet one of them, the tiger snake, carries venom ten times as poisonous as that of the Indian cobra. The bite of the death adder is even more deadly, but fortunately it is so rare that few people have been bitten by

it. The copperhead and the brown snake are the two other poisonous varieties.

Usually associated with snakes in the popular mind are the lizards, of which Australia has a good many, practically all harmless. In fact, the Australians feel very friendly toward at least two of the better known lizards, the one because he eats ants and the other because he is credited with making away with a goodly number of snakes.

The first of these, the mountain devil, is a curious spine-and-scale-covered creature some six or seven inches long. The skin, which is yellowish, with reddish brown splotches, absorbs water like blotting paper. The ants are captured on its sticky tongue.

The big lizard of Australia, known as the iguana in the city and as the "goanna"



Australian wild turkey or bustard. This is one of the game birds now to be found only in the interior, hunters having exterminated them elsewhere. Eighteen to twenty pounds is the average weight.



The white Ibis.

Speaking of the hen with one chicken being busy, she ought to know how to sympathize with the Australian penguin, which lays but one egg and then goes to work to hatch it. Mother penguin leaves the nest only when father penguin is present to take her place. The picture shows mother penguin and her newly hatched "lone chicken."



in the bush, is better known perhaps than anything else in their world of reptiles, as it is found all over the continent. It is a true lizard, a flesh-eater, living and hunting chiefly on the ground but climbing the high trees for shelter. It has a considerable reputation as a snake-killer, and the sheepmen count it a friend for its service in destroying so many young

rabbits and other pests. However, it also destroys many useful and harmless animals, notably the young of birds.

The tiger snake, one of the most venomous reptiles in the world.

The iguana is an egg-layer, laying about a dozen, the size of a duck egg, which it deposits in a hole burrowed out of a rotten tree stump, where they are hatched out by the heat of the sun. The Australian stockman has a firm belief in the medicinal qualities of "goanna oil," obtained from two masses of yellow, butter-like fat, which they extol as a sure cure for lumbago and rheumatism.

Australia has no big game as North America uses the term. An attempt has been made to meet the lack by introducing red deer and fallow deer from England, sambur and hog deer from India and Asiatic buffalo. The fox has also been brought in, much to the regret of stock-raisers, as in some districts they have proved as great a pest as the ubiquitous rabbit. Last year, when fox fur was in demand at high prices, trappers on the western sheep runs, using a motor car to lay the baits, frequently picked up as many as fifty foxes on one ten-mile line of traps.

Some serious attempts have been made to introduce game fish to the waters of Australia with considerable success, though serious mistakes have been made. The mountain streams of southeast Australia and Tasmania are well stocked with Euro-

pean brown trout and American rainbow trout, which have done wonderfully well, ranging to ten and twelve pounds about the river mouths, tho in the headwaters six pounds is counted a good catch.

The Murray "cod," a giant bass running from twenty to a hundred pounds in weight, and the golden perch are now common in such inland streams as the Murray and its branches, but not satisfied with such angling, sportsmen have introduced English perch and carp, poor stuff both from a table and a rod standpoint.

The sea provides some excellent fish, the gamiest being the mullaway, or king fish, ranging up to fifty and even seventy pounds. The average angler, however, is more interested in the sea-snapper, a fine red bream frequently weighing as high as thirty pounds and one of the finest table fish in the world. There is the sea whiting, too, a fish of delicate flavor, colored much like a freshwater trout, and the pike, a surface-ranging fish of



The iguana, or "goanna," as it is known in the bush, is found in all parts of Australia. Many believe that goanna oil is a cure for lumbago and rheumatism.



Mr. Ben Boyce, son of the author, doing a little research work on a goanna, which he encountered on an excursion in the bush.

good size and fight, caught by trolling from a boat.

The mammals, birds, reptiles and fish mentioned are necessarily but a few of the many species and subspecies inhabiting the continent. The animal life of Australia, before the coming of the white man, was a little world by itself, remarkably complete so far as the oddities of Nature are concerned, but remarkably lacking in those animals man has domesticated and molded to his own use.



The mountain devil, native of Western Australia.

CHAPTER VI

TASMANIA

TASMANIA is a heart-shaped island about a hundred miles long and two hundred miles across at its widest spot. It lies off the southeast corner of Australia and is by far its smallest state, having an area of 26,215 square miles; 113 states of its size could be carved out of Australia.

Abel Tasman, a Dutch navigator, was trying to find a great continent in the South Pacific when he happened upon Tasmania in 1642. When he sighted the land he mistook it for the mainland, down whose coast he had sailed without sighting it. He named it Van Dieman's Land, after the superior officer who had sent him on the expedition. Satisfied that he had accomplished his mission, Tasman kept on east and so discovered New Zealand.

But little was thought of his discovery of Tasmania, as it was thirty years before any other

**Tasmanian homestead in the bush
country.**

white set foot on the island. It was a Frenchman this time. Like those who followed him he made only the most casual investigations and then went on. It was not until 1798 that a British lieutenant, Flinders, sailed around the island and learned that it was not a part of the mainland after all. Five years later, in 1803, the first white settlement was made; the following year Great Britain officially took it over and made of it a penal colony for lawbreakers who had been sentenced to deportation from England. This was after the thirteen American colonies could no longer be used as a country to receive deported undesirables.

Our party came to Tasmania from Melbourne, a fourteen-hour run across Bass Strait, 200 miles wide. We were landed at Launceston, forty miles from the open sea up the Tamar River. The Tamar is wide, but shallow, ships which draw more than fifteen feet of water cannot reach Launceston except at high tide. Our ship had scarcely been warped into her wharf before I realized that we had come to a land largely interested in tourists. We came down the gangplank into a veritable mob of porters, cab drivers, and guides, who welcomed us with a fervor they did not display toward those who were unmistakably Australians. Before the war tourists poured about a million and a quarter dollars into the island every year and they are just beginning to come back again.

Launceston is a pretty town of almost twenty-five thousand people. It is the port from which the fruit of northern Tasmania is shipped down the Tamar and sent to the mainland or abroad. There was a time when Tasmanian fruit, and especially the jam which was made from that fruit, was world famous. But when the Commonwealth was formed Tasmania rather lost her identity, especially since a law was passed that every box of fruit or jar of jam or marmalade must bear a label stating that it was made in Australia. Of course, Tasmanians objected strenuously to having Australia get credit for fruit and jams for which Tasmania had built a reputation, but the law remains unchanged. However, the Tasmanians have done what they can to evade it. If you will look at cases



Launceston is the port of the rich lands of northern Tasmania, from which is shipped much of the fruit for which the island state is famous. It is forty miles from the open sea and to reach it ships must navigate the tortuous course of the wide but shallow Tamar River. Ships that draw more than fifteen feet of water go in and out only when the tide is full.

of fruit from the island you will see the word, "Australia," is there—in very small letters—but that "Tasmania" is given plenty of prominence.

All along the railway line from Launceston to Hobart I saw orchard after orchard where the fruit was spoiling on the trees or rotting on the ground. On the wharf at Launceston I had seen great stacks of cases of fine fruit for which there was no shipping and no room in the great warehouses, which were already stacked to the rafters. I found the same condition at Hobart. There was a shipping strike on and not sufficient boats had been sent to the island to carry away the cargoes. In view of this condition, I was not surprised to find the fruit-growers in a pessimistic frame of mind. In ordinary years the fruit crop has a value of some two million dollars; 1,500,000 bushels of apples, 150,000 bushels of pears and

50,000 bushels of apricots is about the average annual production. Some 36,000 acres are devoted to fruits.

That trip from Launceston to Hobart, the capital, is not one I would commend to comfort-loving travelers. The 750 miles of railroad in the island, of which the state owns 590 miles, is all of the narrow gauge variety, three feet six inches



Tasmania makes the most of its tourist traffic. "The Gorge," shown in the picture, is the most noted scenic attraction near Launceston, and every tourist who visits it must pay toll at the turnstile, which can be operated only with a two-cent coin.

wide. The road winds about a great deal, following the natural slope of the country. The running time is comparable only to the notorious "slow train thru Arkansas," which has been of such inspiration to jokesmiths in the United States. It takes seven hours for the "fast express" to make the 121 miles, while the night train does it in ten hours.

Any one in a hurry to get from one city to the other does it by motor, four hours being average running time over the splendid roads. These roads were built almost three-quarters of a century ago by convict labor. It must have been slow and laborious construction, as in many places they have a base that was laid to a depth of four feet.

Long ago some of the cities on the mainland started the report that Tasmania was provincial and slow, and the Tasmanians have heard this accusation so much that they believe it. Strolling about the streets of Hobart after dinner to watch the people at their recreation, I was most forcibly reminded of the middle-sized towns to be found all over the United States twenty years ago. The street cars are mostly ponderous, antiquated, double-decked affairs, tho a few new ones are in service. The automobiles are usually small, except for the huge busses for tourists. Many old-fashioned carriages and tallyhos were to be seen.

In Hobart are to be bought books that purport to tell the true story of convict days in Tasmania. The state generally is not proud of this blot on its 'scutcheon—the fact that until 1852 it was the site of penal colonies for men and women—and mere children, too—who were not deemed fit to live in the mother country, England, and were sent thousands of miles across the seas to spend the remainder of their lives. But Tasmania is not averse to capitalizing what remains of the institutions of those black days.

In the United States some people have seen in river and ocean ports the convict ship "Success," a great grewsome hulk of dark, dank cells, of cruel chains and leg-irons and other means of curbing the unruly. For half a century she has been

voyaging from port to port, exhibiting her horrors. It is mighty poor advertising of conditions long past.

At Port Arthur still stand the buildings of the penitentiaries which were constructed by the convicts themselves out of great stones. A fee is charged to inspect them now and in normal years thousands pass thru the great halls and dismal cells, accompanied by guides, who explain the uses to which the various buildings were put. Not even the most vivid imagination can bring up any stronger picture of penal days than one can get from reading a few of the official records of the punishments administered for trivial offenses. Twenty to thirty lashes for stepping out of line, or for having a potato; six days in a dark underground cell on bread and water for talking back to a guard or for not eating all the food placed before a prisoner; a month at hard labor in chains for talking after being locked in a cell—these are but mild samples.

Down where the peninsulas of Tasman and Forestier are joined, the connecting link of land is called Eaglehawk Neck. It is about a hundred and fifty yards across at its narrowest point and the waters at each side are infested with sharks. In these two features, the narrow width and the sharks, the guards saw a means of holding their miserable prisoners within



This treadmill, in the days when Tasmania was a penal colony, was used to turn a gristmill. It was operated by convicts and the heavy cleats are deeply grooved, having been worn down by the feet of the men who walked many weary miles on the machine without advancing.



This is a view of a bush farm in Tasmania. The trees give one an idea of the vast amount of clearing which the settler must do before he can cultivate his land. The settler often "ringbarks" the trees on a large tract, permitting them to die, and then burns over the area.

the confines to which they were restricted. Across this neck of land was posted a line of sentries, day and night, and near by a line of fierce dogs, bull and mastiff, were so chained that each of them could reach within six inches of his neighbor on either side. It was indeed a desperate runaway who would brave the sharks, the dogs or the bullets of the sentries. Despite all these precautions, however, some of the more stout-hearted convicts did escape. One tied seaweed about his body and slowly swam out and across the cove, walked a hundred and fifty miles and hid himself aboard a ship. Five years later he was returned from England and died in a Tasmanian prison camp.

The punishment of those who attempted to escape was

severe. I saw a treadmill used to turn a gristmill, which was operated by the feet of convicts. It was a heavy, cumbersome affair and the bare feet of the prisoners had worn grooves in the hard wood, where, two abreast, they tramped hours at a time. To be sentenced to the treadmill was punishment calculated to break the spirit of the toughest.

To me the few extracts I read from the books offered the tourist were sickening in the extreme; he must be morbid indeed who would revel in their horrors. If even a small portion of what they tell is true I am glad that the world has so far progressed that brutality is no longer considered an essential part of the punishment of the wrongdoer. In justice to the men who ruled these convict settlements it must be pointed out, however, that they were far from home, and they were in the midst of characters who would hesitate at nothing to obtain their liberty, altho many were political prisoners. Outnumbered as the guards were, discipline had to be maintained.

Tasmania has other curiosities, and I was more deeply interested in them than in the relics of past barbarity. It would seem as if Nature was in a playful mood when she fashioned the island, for here are to be found animals the like of which are nowhere else in the world, nor have they been found elsewhere in fossil form.

Of them all I believe that the platypus is the weirdest mixture of contradictions. It looks like a seal but is web-footed; it has a tail like a beaver and a bill like a duck; it lays eggs but it suckles its young. It was branded a fake when a stuffed one was first exhibited in England.

"I should like very much to see a Tasmanian devil," said I to one man.

He drew himself up proudly, looked me in the eye and said without the least hesitation: "I am a Tasmanian devil, the original Tasmanian devil, if you want to know."

Somehow I lost confidence in that man right then, for I knew that a "Tasmanian devil" is a queer four-legged animal

about the size of a dog, dark brown and with a vicious face.

The Tasmanian wolf, so called, is about like our wild cat, and the Tasmanian tiger is a savage-looking creature resembling a coyote but with dark stripes across his back and hips. The female has a pouch in which to carry her young, which seems to be characteristic of the animals in this part of the world.

Australia is noted for its many varieties of snakes, and they are the worst in Tasmania, where, strangely enough, the farther they are from the equator the more poisonous they are. All the snakes in Tasmania are poisonous, tho only five kinds are actually deadly.

Tasmania has much other animal life, not so interesting to the naturalist perhaps, but certainly more appealing to the sportsman. The hunting and fishing are excellent; the seasons are carefully fixed by law and violators are severely punished. There is no big game to be hunted, but the native bear, a brown-furred little rascal about the size of a young black bear cub, affords rare sport to those who seek him in his mountain home. As our train wound its way around the hills I saw a few of these bears asleep in the forks of trees and apparently undisturbed by the noise of our passing. When the mother bear travels the young one goes along by riding on her back and clinging tightly to the fur of her neck.

The mutton bird, which also is protected except for a few weeks in the year, is another fowl much sought. It breeds near the sea. Mutton bird catching, however, is far from exciting sport, as the young birds can be run down by a man



One of the finest buildings in Tasmania the town hall and postoffice in Hobart. The tower, clock and chimes were added to building as a memorial to the late Queen Victoria.

afoot and knocked over with a stick. The flesh is considered excellent and cooked down in its own fat will keep for a long time.

Like other parts of Australia, Tasmania is overrun by rabbits. Miles of rabbit-proof fencing are required to keep these pests out of the crops. Hunting them is not exactly considered as a sport, but they form a staple article of diet on the tables of the poor. In Launceston I saw the man who supplies most of the rabbits to the town. He was driving a "jinker," a two-wheeled cart, and it was literally weighted down with bunnies. For two cents more than the customary price he skinned and dressed the rabbit while the customer waited. As a result his "jinker" was trailed by a horde of dogs, waiting for a chance at the parts he throws away. Their yelping was a constant advertisement for the rabbit man.

In the museum at Hobart I saw the skeleton of Truganini, the last of the aborigines of the island. She died in 1876, the



Hobart is the capital of Tasmania. It was founded in 1804 and now has a population of 40,000. The suburbs are built on sloping hills and from them one gets many entrancing views of the harbor and city.



Ocean docks at Hobart.

last survivor of a race that once numbered thousands. Less than a hundred years of European civilization destroyed them. From all over the world scientists who are interested in the evolution of the human race have come to Hobart to gaze upon the skeleton of Truganini, to measure her bones and seek other data buried in the past and unrecorded history of the black-fellows.

In the days when Tasmania was only a small colony and the blacks were exceedingly troublesome, in 1830, to be exact, the white settlers, to the number of 3,000, organized a hunting bee in which all the natives were killed with the exception of 200, who were placed on a reservation where, a score of years later, only forty remained. Truganini was the last of these.

We had not been long in Hobart before I learned that horse racing is the national sport of the Tasmanians; in no other state of the Commonwealth is it so popular. Hobart is the

headquarters of the notorious gambling ring known as Tattersall's. It is licensed by the state government and thru its hands pass millions of dollars each year. The government receives in stamp duties and a dividend tax \$125,000 a year. Chances are sold on the horses entered in eighteen of the big meets in Tasmania and on the mainland. Two million tickets are sold, at one or two dollars each, and Tattersall's keeps ten per cent of the money as a commission. On the Melbourne Cup, the greatest race in Australia, the first prize is \$50,000, divided among holders of two-dollar tickets.

You can buy a Tattersall's ticket almost anywhere in Australasia, but you do not get the ticket at the time. You give a mail address to which it may be sent and you are paid your winnings the same way about a week after the race. To give an assurance of honesty to the drawing it is done by an official of the Tasmanian government and there never has been any question of fairness.

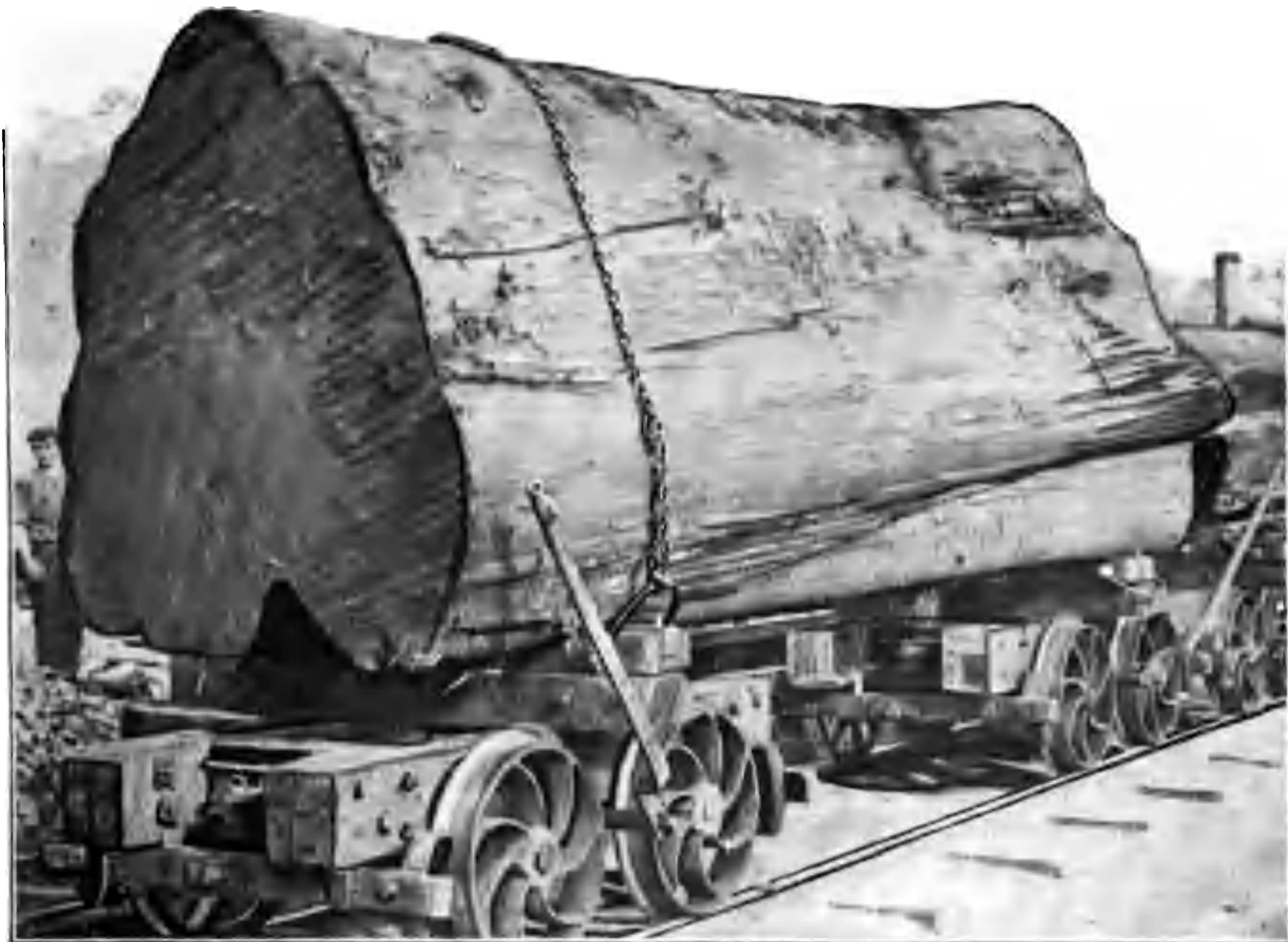
Other states, however, do not look with favor upon the institution, and in New Zealand it is under governmental ban. Mail there addressed to Tattersall's or to any known agent is destroyed, and the postal authorities hold up letters which they have reason to believe come from Tattersall's.

Tasmania has a wealth of timber, but, like most new countries, it is prodigally wasting it. As our train wound thru the country there was evidence on every hand that fine timber was being ruthlessly destroyed to clear it for agriculture. We passed miles and miles of forests, every tree of which had been ring-barked in order to hasten the work of destruction. With its bark circled close to the ground by ax cuts the tree is deprived of the sap so essential to its life; in Tasmania it dies and falls within a few months. Wood is so plentiful that usually the fallen tree is merely burned up and no effort to save any of it is made. It is a bleak landscape that those hundreds of acres of blackened stumps make.

Virtually everywhere in Tasmania these great forests are to be found. The tall timber trees grow from the water's edge at sea level to an altitude in the mountains of 4,000 feet above

sea level. Trees of great dimensions tower over the lesser undergrowth on plains, valleys, hills and mountain slopes. Of the 16,778,000 acres in the island there are only 75,500 occupied by lakes and 535,000 acres of cultivated land. With the exception of a few barren areas on the tops of mountains the rest of the country is a virgin forest.

There are innumerable varieties of eucalyptus, one variety of which is the Tolsa blue gum, which often grows to a height of 300 feet. Many of these trees have no branches within 150 feet of the ground and at the base they measure forty feet in circumference. Beams a hundred feet long and two feet square are easily obtainable from the trees in these forests. The wood is strong, dense and durable and so heavy



A log from a giant Tolsa gum tree. This is a species of the eucalyptus tree and some of them grow to extraordinary height, the average being about 150 feet. This wood is very strong, resists well both fire and water, and is immune from the attacks of boring insects, which quickly riddle other woods.

it sinks in water. It will last a quarter of a century as railroad ties or paving blocks; its strength is double that of our oak and it is immune from the attacks of the great white ants and other borers which destroy the average timber in a short time.

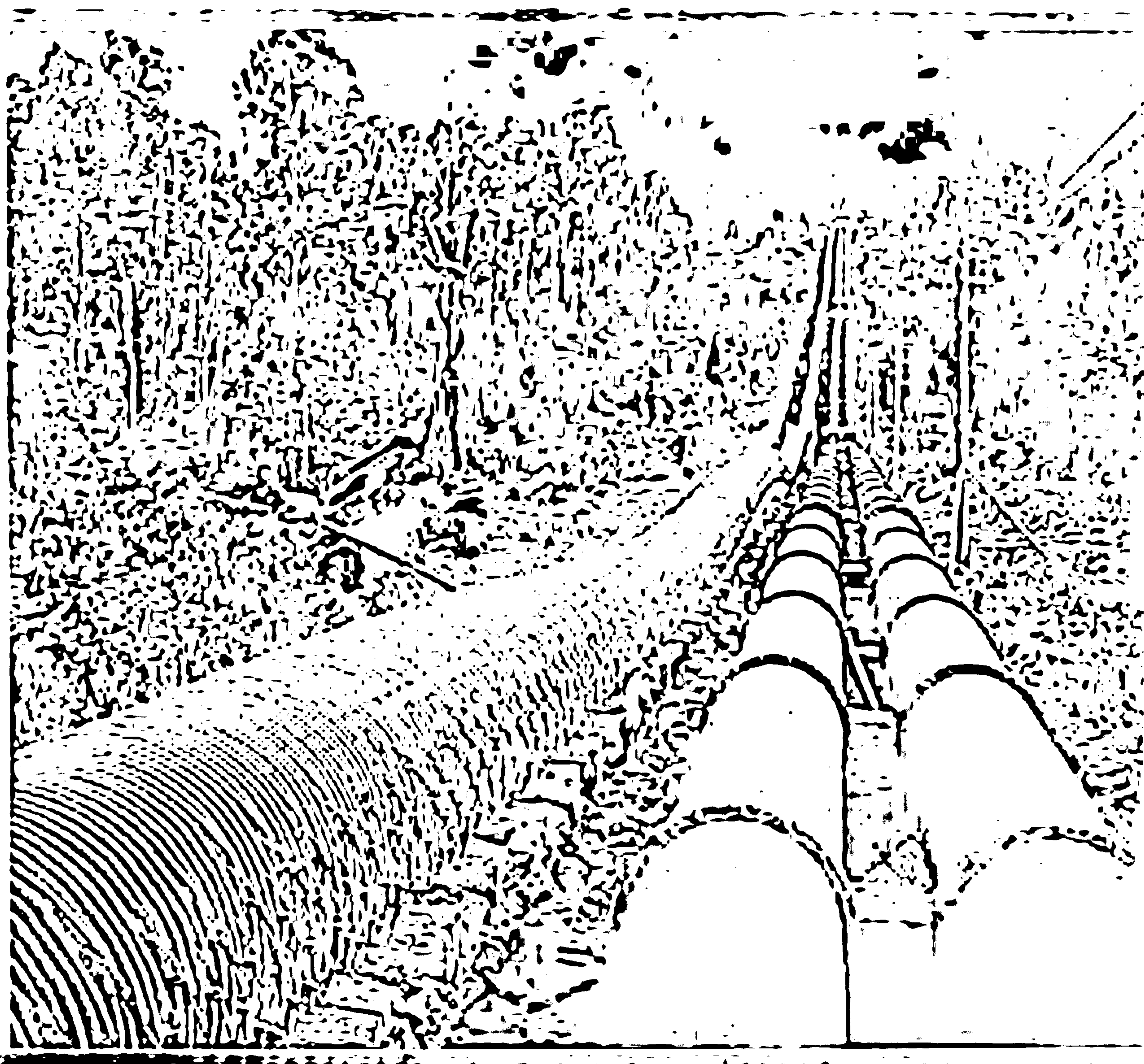
Tasmania does a great business in timber and dressed lumber. The wharfs at her ports are vast piles of lumber, brought into the cities on small sailing vessels from all around her coasts. You see a procession of one-horse wagons hauling it away to the local lumber yards; you see great cranes loading it into vessels for shipment out of the country. Ships that bring coal to Tasmania, chiefly from Newcastle, New South Wales, take away lumber. Tasmania has little coal of her own, and what she does mine is of poor quality, so mostly wood is burned or coal from the mainland. In the near future, however, the imports of coal will drop, as there is an abundance of prospective water power in the five sites which have been chosen by the government for hydro-electric development.

It is said that 216,000 horse power can be developed at these sites now, with the possibility of increasing it to 500,000 horse power ultimately. The one scheme which is actually under development to the extent of one-half its possible 70,000 horse power, is that at Great Lake, in almost the geographical center of the island. The lake covers forty-two square miles and is 3,250 feet above the sea; it drains an area of more than 200 square miles where there is an annual rainfall of forty-five inches. When a forty-foot dam is completed it will raise the level of the lake thirty-five feet; the resulting storage of 312,500,000 gallons of water will make the Great Lake reservoir fourth largest in the world, rivaled only by Elephant Butte, Assouan and Roosevelt reservoirs.

From the lake the water flows five miles down the River Shannon, then is diverted down a canal three and a half miles long, to empty into a lagoon, from which it reaches the turbines of the power house thru pressure pipes almost two miles long. These pipes are made from wooden staves of native timber and rest on log foundations laid on the surface of the ground.

They carry the water to a 150-foot head, where two of them are replaced by steel pipes another mile long, which carry the water to a 400-foot head. One wooden pipe goes all the way and was built during the war when steel was not obtainable. It is forty-nine inches in diameter, probably the largest wooden pipe in the world with water pressure at a 400-foot head.

I was amazed to learn that the rainfall in Tasmania is so



The pipes which carry the water from the Great Lake of Tasmania to the power house of the island's greatest hydro-electric development. The pipe on the left is of wood and was built during the war when steel could not be obtained. It is two miles long and forty-nine inches in diameter and is said to be the largest wooden pipe carrying water to a 400-foot head in the world. It is made of eucalyptus staves, held together by wire.



Tasmania maintains schools in all parts of the state, even in the bush districts. This photograph shows a group of children in the school at Maydena, near Fitzgerald.

great. It varies from an average of twenty inches a year on the east coast to one hundred and sixty inches on the mountainous west coast, in some localities attaining the enormous volume of two hundred inches. As the center of the island averages 3,000 feet above sea level, the rivers fall very rapidly on their way to the sea. So you can see the immense value of this potential power, virtually monopolized by the government.

Already this power is being utilized industrially. Electrolytic zinc is being manufactured near Hobart, as is also carbide sufficient for the needs of all Australia. Large woolen mills are in operation at Launceston; a large cocoa and chocolate factory is being erected at Claremont; large paint works are being run, and portland cement works

on a big scale have been established in the south of the island.

Mining is of considerable importance in Tasmania. The first excitement along this line came with the finding of tin at Mt. Bischoff in 1871, followed by the discovery of gold, copper and silver. The state leads the Commonwealth in the production of tin, and is second in silver and lead. Recently the government has permitted the diversion of the waters of the Savage River so that gold and osmiridium may be obtained from the bed of the stream.

Despite all these resources Tasmania remains primarily a land of gardens, farms, orchards, forests and beautiful scenery. The last six years have not been prosperous ones for the



One of Tasmania's chief sources of wealth—an apple orchard on the rich slopes of the north. For a long time much of this land was regarded as useless, but now is valued at from \$125 to \$250 an acre. Tasmanian apples are of rare flavor, size and appearance, and on several occasions have topped the market in London during the year. Cider mills are found thruout the island and cider is almost the national drink of the island state.



Packing the famous Tasmanian apples.

“tight little island,” as some one has called it, as shipping, on which the value of its products depends, has been sadly demoralized since the war. With the return to normal, however, Tasmania is due to step forward.

Officials of government departments with whom I talked were quite frank in discussing the conditions which they believe are holding the country back. It is largely a matter of wages and of living conditions. Wages are the lowest of all Australia, while the cost of living is as high as on the mainland. The best-paid laborers are the skilled iron workers and the electrical engineers—they get a maximum of \$30 a week. As is the case in all Australia the rate is fixed by government wage boards for the various trades.

The number of young people, men and women, in their twenties and thirties, is small compared to the total population. You see a great many hale and hearty old people who stay because of the wonderful climate, but the majority of those engaged in commerce and the skilled trades are from the other states.

“What becomes of the Tasmanians?” I asked.

“Oh, they all go to the mainland as soon as they are old enough to work or get married,” was the reply of a newspaper

man. "Our population is not increasing, altho our birth rate is high—what we gain by the cradle we lose by ship."

The Tasmanian government is beginning a vigorous campaign to attract immigration to offset the threatened loss of population due to the greater inducements offered by the other states in the shape of higher wages. An official of the bank, which is maintained by the state, offered me the following logical explanation:

"One of our big handicaps is that the land is held in large blocks by rich owners. The state is too poor to buy these lands and subdivide them into small farms which can be offered to settlers on easy terms. To the experienced farmer with ready money Tasmania offers a splendid opportunity. To the man who may be experienced in farming but who has not at least \$2,000 there is little inducement to choose Tasmania in preference to other states. The state owns lands which it will sell to him on fair terms, and will even advance him money with which to get started, but those who settle here without money can get only uncleared lands, which means that for two years there will be no profit for him and he must earn his living by working for others at very small wages. To a man with a sturdy family, the kind of farmers we would like to attract, there isn't enough in sight to induce a man to take a fling at it."

Tasmania's possibilities as an agricultural and pastoral state have therefore been only slightly exploited. Apples, wheat, oats and hops were the four principal crops. Of the other staples she raises scarcely enough to supply her own needs.

Butter and cheese factories are found thruout the island, many of them being co-operative plants owned by the farmers themselves.

It is on fine merino sheep that the island specializes, its rams and ewes being in great demand for breeding purposes in other countries. Before the war Tasmania virtually supplied the countries of South America with their imported breeders. Naturally, wool is one of the big staples of the island. Its million and a quarter sheep, the average for the past ten

years, produced in 1920 more than 11,000,000 pounds of the finest wool.

Tasmania's government and relation to the Commonwealth is the same as the other Australian states. It has a governor sent out from England, but to all intents and purposes it is governed by its premier and his cabinet, while the legislative end is in the hands of a parliament of two houses, with a legislative council, or upper house, of eighteen members, and an assembly, or lower house, with thirty-five members.

It has three government institutions which are in competition with private enterprise—a state insurance company which handles all lines but life; an agricultural bank which lends money on lands in addition to helping new settlers by making them advances; a public trust office, modeled on the one originated in New Zealand but with two added features. One is the fact that if a will so orders private individuals may be associated with the public trustee in the capacity of advisers in the administration of estates. The other feature is that the public trustee will act as custodian of an estate but will make investments only upon orders of trustees when named in the will.

CHAPTER VII

VICTORIA

VICTORIA, with the exception of the island of Tasmania, is the smallest state in the Commonwealth of Australia. It occupies the southeastern corner of Australia. Its length from east to west is 420 miles, and from north to south 250 miles. It contains 87,884 square miles, or 56,245,760 acres, which is about the size of the State of Kansas with Connecticut thrown in. Its population is 1,500,000, of which 725,000 live in the capital, Melbourne, and its suburbs. It is a significant tribute to the richness of the state's soil that less than half of its people live in the country, yet they are able not only to feed the whole state, but export great quantities of foodstuff as well.

The early visitors to the coast of Victoria were not sufficiently attracted to remain. Port Phillip, as the harbor of Melbourne was named, was an uninviting place, bordered by sand dunes, and the venturesome



Queen Victoria statue in Ballarat.

white men who made short trips of exploration beyond the shore line brought back reports of great tribes of unfriendly aborigines and that the country was unfit for cultivation. This error saved Victoria from becoming the site of a convict colony, for the governor who was sent there to establish such a settlement wrote back such disparaging letters and such strong pleas that another place be chosen that he finally was permitted to move the whole establishment across Bass Straits to Tasmania.

So Port Phillip was let severely alone for many years. But from Sydney exploring expeditions kept going south and west, finally discovering some rich lands which were within the boundaries of what now is Victoria. The coast line, however, was not touched until several hardy souls from Tasmania, driven by that urge which has animated the world's pioneers, crossed over and located in the despised district and proved that it was possible to make things grow there and to raise stock. Port Phillip became a small settlement, little more than a gateway to the fertile grazing plains west and north of it.

What these settlers started, the people of Victoria have kept up, for today, almost a hundred years later, I find it still a state where agriculture and livestock-raising predominate, and where wool, hides, meat, wheat and small grains and dairy produce are the chief articles of export. There are today between five and a half and six million acres under cultivation,



Harvesting wheat with the machine that cuts, thrashes and sacks the grain at one operation.



Irrigation is reclaiming thousands of barren acres in Australia. The Victorian farmer has been a leader and pioneer in irrigation. The picture shows a flood gate in one of the more extensive irrigation systems operating in Victoria.

and in 1921 the wheat crop was well over 40,000,000 bushels, while 15,000,000 sheep and 1,500,000 cattle ranged over Victoria's plains and hills.

Some of our party were quite fascinated by the wheat harvest in the dry-farming districts in the interior. They never had seen machines which strip the grain out of the heads of the wheat, thrash it and sack it, all in one operation. Twelve years before I had seen similar machines at work in the Argentine Republic. At the time I wondered why American farmers did not use this method, but I soon learned that it was not practical except in a climate that contained little moisture at harvest time.

In Melbourne I had the privilege of talking to one of the pioneers in the irrigation work of Victoria, Ben Chaffey. He

is from California, where he and his brother, who is associated with him, had had irrigation experience. They saw vast possibilities in the waters of the Murray River, which for over a thousand miles of its very crooked length is the boundary between Victoria and New South Wales. In the northwestern part of the state they saw thousands of acres of land which they believed could be made productive if they only had some of the Murray water that was escaping unused to the sea. So they obtained from the government a grant of 50,000 acres and bought 200,000 acres more on generous terms. The government also gave the concession of enough water from the Murray to irrigate their holdings and fill the needs of all who might settle there. That was in 1887. The Chaffey's installed pumps at many places on the banks of the Murray and dug hundreds of miles of channels for the distribution of the water. Settlers came in quite readily then, and the Chaffey's sold them land, and water equivalent to fifteen inches of rainfall a year, at the very reasonable price of three dollars an acre.

But their forethought did not end there. They knew that in certain years the Murray would not run full, that the dreaded Australian droughts might come upon them, and that they must provide some means of meeting this condition. The planting of grape vines and fruit trees was their solution, for in dry years the sale of raisins and other fruit offset the failure of the wheat crop.

Victoria has spent over \$30,000,000 on irrigation, including advances to private individuals for the same purpose, since 1905, when the water control of the state was vested in a rivers and water supply commission. Today more than 300,000 acres of land, which otherwise would have been only slightly productive, have been supplied the crop-insuring water.

The state has no large and deep rivers. Most of its streams are so shallow that they are not navigable except for small, flat-bottomed boats. Many make a brave start, but soon dwindle into tiny rivulets which finally lose themselves altogether in the dry lands. The lakes are not many in number and

most of them are merely marshes except in flood time. The chief irrigation problem, therefore, has been one of storing the water against the time of need, and this has meant the building of many dams and reservoirs. The most important dams are those across the Murray, the Loddon and the Goulbourn rivers. The Goulbourn is the largest river in the state, and the overflow from the great weir which has been built across it near its source is caught by another dam twenty-six miles down stream. From both reservoirs mile upon mile of channels carry the water into the arid lands.

In the northern part of the state are what are known as the mallee lands, millions of acres covered with thick, tough scrub with many-pronged roots which it is back-breaking work to get out. But the clearing of the land is not the big problem;



Merino sheep have reached their highest development in Victoria. This young merino ram is typical of the stock which is bringing fame and wealth to this Australian state.



Sheep shearing is a profession in Victoria. Laws have been passed which have done away with the old time shearer who went from place to place, getting a job where he could and living any way the sheep raiser saw fit to make him. Proper accommodations must now be given him and he must be handled with gloves or the union to which he belongs will take a hand. Electricity is now used almost exclusively for shearing the eight to nine pound merino fleeces, for Victoria has led the world in the development of the wool-producing merino.

this district has an uncertain rainfall and before the land can be made productive water must be brought to it. The nearest source is the Murray, but unfortunately, the mallee lands are higher than the river. It is proposed to overcome this difficulty by building a huge reservoir to hold the rainfall from running off.

In Victoria, clearing mallee is done mostly by tractors, which are used to haul across the scrub great iron cylinders—often a discarded steam boiler—which beats down the bushes and crushes the sap out of them. When it has dried, fire is set to the scrub and the land burned off. Then the heavy

roots are grubbed out and the land is ready for cultivation after it has been treated with phosphates. The roots are used for fuel.

Sheep in Victoria are raised mostly for their wool, and I was not surprised to learn that in this state the merino has reached the highest development in the world. The original merinos were brought to Victoria from Spain and Great Britain, and it is said that most of the finest sheep are descended from a famous flock of Sussex, England. If so, the Victorian sheep of today far surpass their ancestors, for the fleece now weighs an average of eight or nine pounds, in contrast to the three or four-pound fleeces of the sheep imported fifty years ago.

Naturally, the wool-clipping season is a strenuous one, for the annual clip is over 100,000,000 pounds, valued at between twenty-five and thirty million dollars. Electric shearing machinery is universally used, the shearers traveling thru the country in bands. Like all classes of labor, the shearers have a union, and one of their most stringent rules is that a shearer cannot be compelled to shear wet sheep, and must be paid for the time he is compelled to be idle while the fleece is drying. The man who raises sheep is grateful at selling time for the heavy fleece on his Victorian flocks, but it is a mixed blessing in shearing time, for even in the driest of seasons a heavy fleece will pick up a surprising amount of moisture.

Raising of sheep and lambs for meat is secondary to wool, in spite of the high esteem in which Australian mutton and lamb is held in other countries. Until the drought of 1914 this trade was on the increase in Victoria, and the last few years have seen a considerable revival. There are not more than twenty freezing plants in the state and the 4,000,000 sheep and lambs, 250,000 cattle, 400,000 hogs and several million rabbits, which they handle in a year, keep most of them busy.

When I was a young fellow I remember reading a very popular brand of fiction in those days, a yellow-backed, hair-raising type of story which purported to depict life in the Australian gold-mining camps. I remember, too,



Many of these old prospectors still follow the lure of the gold which made Victoria famous. They pick up a few grains of gold now and then—just enough to keep them hoping for the strike that means a fortune. State records show 20,000 prospectors' licenses issued annually.

a many-stanzaed poem of the same order, a lilting, thrilling thing that announced at the very beginning that what followed was "a tale of Ballarat and Bendigo."

I felt somewhat the same thrill when the train from Melbourne slowed down after a seventy-five mile journey and I learned that I was at last at Ballarat. But such a different Ballarat from that graven on my mind by the wild tales of long ago! I stepped from the train into a modern station, and thru the station into the midst of a modern town with wide streets, good-sized stores, electric street cars, arc lights and automobiles.

It was in New South Wales that gold was first found—by

an Australian miner who had joined the rush of '49 to the California diggings, and, failing there, had recalled that the formation of the country around his own Australian home was a great deal like the gold fields of the Pacific coast, and had hastened back to go prospecting. The discovery of gold in New South Wales threatened to depopulate the struggling colony of Victoria and its officials offered a reward of \$800 to the first person to find gold in the state. It was at Ballarat that the reward was claimed, for only a few yards from the trail over which countless feet had tramped on the way west from Melbourne a nugget was picked up and several others found.

In the boom days, the United States furnished hundreds of the motley crew of rough-and-tumble men who flocked to Ballarat in search of fortune. Many of them quit the California fields, lured on by the tales of even richer finds in Australia. It took two or three months to cross the Pacific in the sailing vessels of those days, and when they reached Port Phillip it was to find it virtually deserted. Officials, judges, lawyers, doctors, shopkeepers, clerks and all but two of the police force had quit their jobs to join the rush to Ballarat and Bendigo and later to Ararat.

Before they ceased paying, the gold fields of Victoria, both alluvial and quartz, had yielded treasure valued at one and one-half billion dollars. Several years ago the cost of mining had increased so greatly, and the veins no longer ran wide and rich, that gradually one mine after another began to close down until now all of them have been abandoned. Today you will not find a single shafthouse or mine derrick around Ballarat.

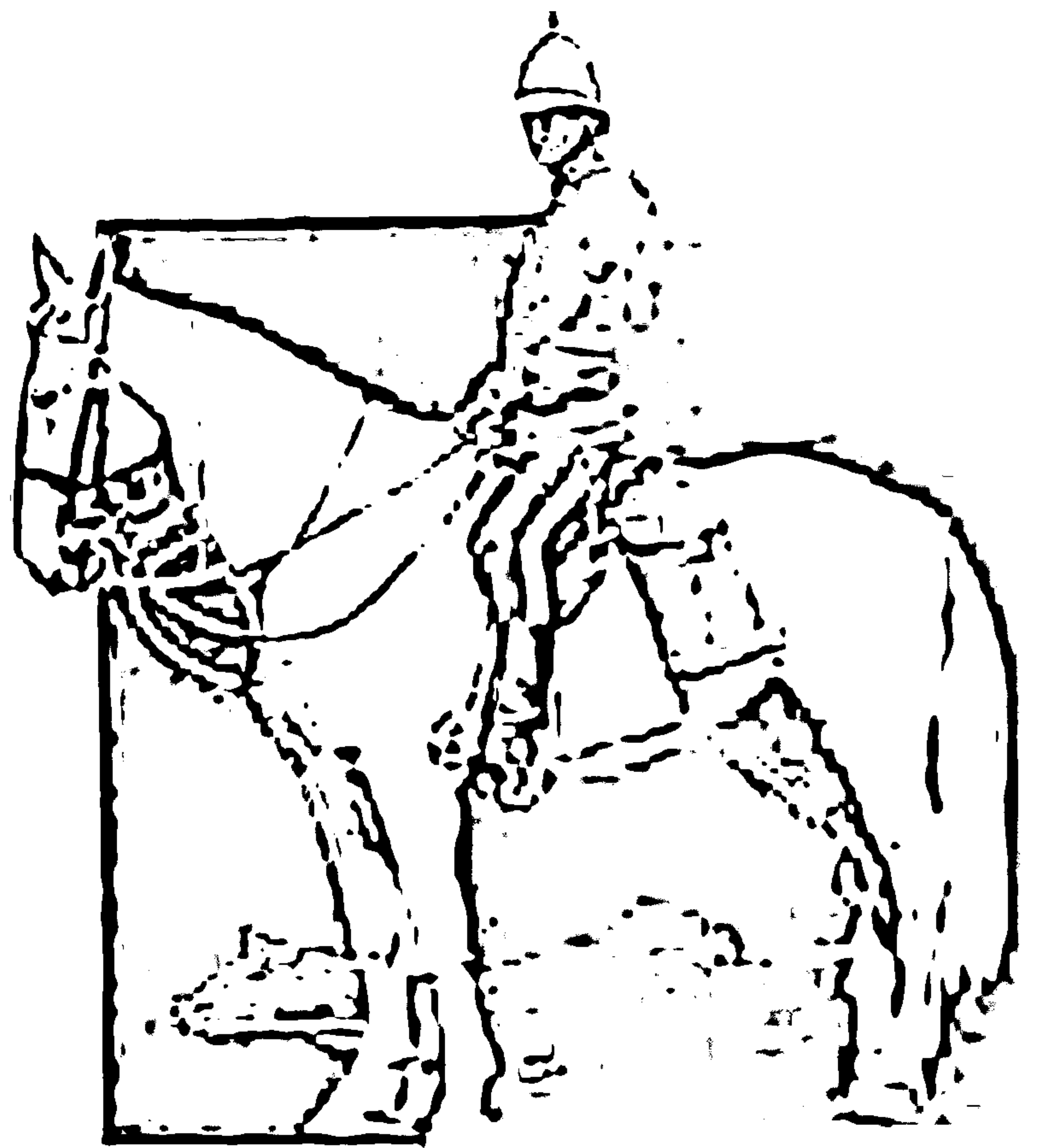
At Bendigo, ninety-five miles away, several mines are still operating, but hardly paying cost. There are other minerals to be obtained in the state, but they total only \$6,000,000 in value a year.

No story of Ballarat would be complete without a mention of the famous battle of the Eureka stockade on a Sunday morning in December, 1854. The government had tried to tax the miners for licenses and undertook to enforce collection of the

tax by using troops to hunt down the unlicensed diggers. The miners of Ballarat brought things to a head by erecting a stockade, raising a flag, which they proclaimed that of the republic of Victoria, and defying the authorities. The troops captured the stockade in a brilliant assault which cost some forty lives, and the backbone of the rebellion was broken, but the miners won, because the obnoxious diggers' license tax was repealed.

Had Ballarat been like many other mining cities it would have fallen to a mere village by now. But it is the center of a rich farming district in which there is much wheat and many cattle and sheep. So when mining played out, Ballarat went calmly ahead supplying the agricultural needs of its neighbors. Today, with a population of 40,000, it is the largest inland town of the Commonwealth and correspondingly important.

The bushrangers and outlaws who swarmed into Victoria and New South Wales as a result of the gold strikes, and the necessity of protecting the shipments of gold to the coast, gave birth to the magnificent Australian police force, which has a record surpassed only by the Royal Northwest Mounted Police of Canada and our own Texas Rangers. Victoria today has 1,500 policemen, or constables, as they are called, to cover her entire territory. Two hundred and fifty of them travel lonely beats in the bush country, many miles from civilization, performing their varied duties, the least of which is the capture of criminals. The state is singularly free from crime, only 209 per-



The Australian Mounted Police is an organization similar to the Northwest Mounted Police of Canada, and the Range Riders of the United States. A mere handful of these mounted officers patrol the vast country district and their reputation is such that one of them, aided, can handle almost any situation.

sons having been convicted for serious offenses in the last year for which figures are available.

The lot of the constable who patrols a bush district is hardly a happy one. Sometimes he is the only visitor the settlers see from civilization from one year's end to another. The terrible loneliness of the bush cannot be fairly imagined by those who have not lived in it. In many places the trees are so thick that it seems a country of perpetual twilight. It is weird and uncanny and has a depressing effect upon the bush dwellers, in striking contrast to those who live alone in the mountains or the plains in perfect content. Insanity is increasing in Victoria,



There are sixty varieties of the eucalyptus tree in Victoria and the majesty and beauty of the forest is not soon forgotten. Some of these trees attain to a height of 300 feet.

In a picture it looks very inviting and romantic, but to the settler in the bush there is more prose than poetry in life in his isolated shack, often many miles from a neighbor.

and medical authorities say the horrible loneliness of life in the unsettled portions is largely responsible.

There are 60,000 more women than there are men in Victoria, yet marriage seems to be going out of date, for every census reveals the proportion is increasing. The probable explanation is that the lot of a hard-working farmer's wife in a thinly settled district is hardly calculated to appeal to a girl as much as remaining single in a city. Another reason is the men drink much liquor.

Depressing as the bush country may be to those who live there, no one who has seen a Victorian forest of eucalyptus trees is likely to forget it. The eucalypts are of many varieties, and the kinds that grow in one place quite often would die if planted in another place only a few miles away. In Victoria alone there are over sixty varieties, some reaching a height of 300 feet. The eucalypts, or gums, replace very rapidly—seven times as fast as oak or hickory. Twenty varieties growing in Victoria have commercial value, yielding tannin from the bark, lumber from the wood and oil from the gum and leaves.

Railroad sleepers made from the blue gum have been known to last for forty years, shingles made from the peppermint gum will last almost as long, due in both cases partly to the extreme dryness of the climate. Another variety, the ironbark, is of great value for its quality of withstanding fire better than iron, which warps in great heat.

Victoria has some 12,000,000 acres of forest land under the control of a commission formed to prevent the destruction of woodlands. Three million acres of state lands are on the slopes of high mountain ranges and are protected for the maintenance of springs and streams, as the forests of a country are the natural conservators of its water sources. In the center of the state large tracts which have been cut over are closed now in order that new timber will have a chance to grow, 4,000,000 acres have been set aside as reserves, 500,000 acres being cut over, and the rest, in the eastern part of the state

where transportation has not been opened up, will be held for the future.

In spite of the fact that in many parts the state is not thickly populated, Victoria maintains free schools in every county. On a map at which I was looking the schoolhouses were indicated by red dots. In the farthest northwest county I found a lonely red dot, altho there were not a hundred persons all told in the district. There is a total of 2,500 public schools in the state.

School attendance is compulsory between the ages of six and fourteen. In some cases, when children have been taken from school at fourteen, attendance at night school to the age of seventeen is compulsory. Deaf and dumb or defective children must be kept in school till they are sixteen. In order to enforce attendance in sparsely settled districts the state furnishes conveyance to children living far from the schoolhouse. In other cases, teachers drive thru the country, giving short periods of instruction daily and assigning lessons for the next day. This visiting plan ought to be adopted in some localities in the United States.

What a blessing the ability to read is, was impressed upon me most deeply during one of our journeys by train thru Victoria. At frequent intervals our ears were assailed by loud shouts and cries from along the tracks thru the swiftly moving train windows. Always the cry was the same, whether it was in the hoarse voice of men or in the shriller tones of children. Puzzled, I turned to one of my neighbors and asked him what it meant.

"They are crying: 'Paper! Paper!' " he answered. "They live where papers are not to be bought and are far from town. It is the custom in this country to save the newspapers and magazines which you read on the train and toss them out the window when you hear the people ask for them."

In 1835, a Tasmanian, John Batman, sailed across Bass Straits to the then deserted Port Phillip, and, taking a stroll for thirty miles inland, came upon a river called Yarra, which



Melbourne's beautiful public library. Beneath the great concrete dome, said to be one of the largest in the world, is the library, gallery of art and natural history and the technological museum. The library has a quarter of a million volumes and about 600 volumes are circulated daily. The reading room will accommodate 300 readers and side rooms will take care of half as many more.

took his eye. That night he wrote in his diary: "This will be the site for a village."

I wonder what old John Batman would say if he could have revisited that site when I was there, eighty-six years later. The village which he saw in his mind's eye has materialized in Melbourne, a city with three-quarters of a million people, the ninth largest city in the British Empire and the thirty-eighth city in the world.

When Melbourne was laid out its principal streets were made parallel to the Yarra River, and so they have remained, running northeast and southwest. They are wide, just a mile long, and are crossed at right angles by other wide streets

every eighth of a mile. The center of the business part of the city is a mile long and a half mile wide. At the eastern and western ends the streets are at the summits of gentle grades which slope down to meet in what was once a marshy gully.

It is a peculiarity of the five long streets of the business section that each of them has a poor relation, narrow streets midway of the blocks that Americans would call forty-foot alleys. But they are far from being alleys, for upon them front stores and office buildings fully as imposing as some of those on the wide streets. The method of naming them is rather confusing, for you will find Collins street and then its



The magnificent double railway station of Melbourne, Australia. It has two separate stations under its roof and each has its own name. A tunnel a quarter of a mile long connects it with an ancient building called the Spencer Street Station at which the thru trains that touch all the state capitals stop. The building covers forty acres and in normal times 1,300 trains enter and leave it daily.



Six-track railway between Melbourne and Richmond. This line has been electrified since this picture was taken.

narrow street, Little Collins. However, it is these little streets which enable the city to compress into such a small district its really great business, for the five principal streets are a hundred feet wide.

The street cars of Melbourne are operated by underground cables, like those in the United States thirty years ago. The cars are painted in vivid reds, blues or greens. It is done with a purpose, for the color indicates the route. The conductors and motormen are garbed in khaki. The conductor is decorated with strips of colored paper pinned to his blouse by safety pins; these are his cash register, for he must punch on these the amount of money taken in fares. The different colors represent different fares, the cheapest ride being four cents for two miles. The street railroads are owned and operated by the city.

Directing traffic on the streets of Melbourne is a double

affair, for at the crossings stand a policeman and an employe of the railways. The policeman majestically waves vehicles and pedestrians across at intervals, and the street car signalman waves flags of green and white to move the cars; at night lanterns are substituted for the flags. Pedestrians must cross at right angles—the law frowns on “jay-walkers.” As in all British cities, the traffic moves on the left-hand side of the street, which is confusing to Americans, who have been taught to “turn to the right.”

Australians are generally splendid specimens of manhood, but in Melbourne they seem to be taller and heavier than elsewhere. They walk with a bit of a swagger and with a vigor and swing that speaks of top physical condition. Perhaps it is the climate. Melbourne is as far south of the equator as Richmond, Virginia, is north of it, but in Melbourne snow is unknown and the summers have only a few really hot days.

It is quite the thing in Melbourne to date events from the year that so-and-so won the Cup, by which they mean the Melbourne Cup, which is run at Flemington race course in November each year. Horse racing is the national pastime of Australia, and a great many say it is the national curse, too, for no race is run, even in the most remote districts, without having some thousands of dollars wagered upon the result. Immense fortunes change hands each year on the outcome of the cup race for it is the one day of the year when almost every Australian plunges. Betting in Australia is done mostly thru bookmakers. The pari-mutuel or totalisator machines are forbidden by law, but at some race courses they are used anyway.

Melbourne has one railroad station that is a huge structure of modern architecture and another one that is rather ancient and decrepit. The new station is used for suburban trains, while the thru expresses and mail trains use the old one, which is probably as it should be, as the suburban traffic of Melbourne has assumed great proportions. Like all other railways in the state, with the exception of twenty-five miles, the suburban lines are state-owned. They have been converted



Archbishop Mannix's Cathedral and Madame Melba's home, the latter thirty miles from Melbourne, always attract the sightseer. The famous singer's home is noted for its simplicity and the good taste displayed in its furnishings.

into electric lines in order to gain speed, cleanliness and frequency. There are 5,500 miles of railroad in the state, the Director of which, or General Manager, as he would be called in the United States, is Harold W. Clapp, whose railroad training was received in America.

The city government of Melbourne spent a million dollars



The average dwelling in Melbourne speaks well for the good taste and industry of the average citizen. This picture shows a typical Melbourne home.

of the river, close by the wharfs at which are moored the ships that come from Port Phillip.

The visitor to Melbourne will be impressed as I was by the number of churches, of all denominations and ranging from modest brick structures to the great cathedrals of the Anglican and Roman faith. If they are not well attended it is not because of other interests to divert the mind on Sunday, for in



This is a homesteader's house in the irrigation district of Victoria.

building a municipal market house. It is a three-story structure of brick, which houses hundreds of stalls, and here in the early morning are held the auctions of produce to which the housewife comes to do her kitchen shopping. One part of the building is given over to storage chambers for poultry, butter, rabbits and products intended for shipping overseas, for the market house lies in a bend

Melbourne as in all Australasia the injunction to remember the Sabbath day and keep it holy is rigidly obeyed. All business save hotels, restaurants and drug stores close tight, and over the city broods a restful quiet.

As in other states of Australia, the governor is appointed by the British imperial government, but the real governor is the

Premier of the party which is then in power. Like his seven fellow ministers who make up the cabinet, he usually is a member of one of the two houses of the state parliament.

The upper house is called the Legislative Council and consists of thirty-four members, two from each of the seventeen electoral provinces into which the state is divided. The members of the Council are not elected by universal suffrage but only by the votes of owners of a certain amount of property, members of the learned professions, students and graduates of universities, naval and military officers.

The Legislative Assembly consists of sixty-five members, who are elected by universal suffrage. They hold office for three years unless Parliament is dissolved sooner.

The man who gets the most votes in a Victorian election is not necessarily the one who is elected, for the preferential system is in effect. The voter indicates second and third choice on his ballot. If the leading candidate has not an absolute majority



Australia gave the world of labor the eight hour day in 1856, many years before it was adopted in any other country. This is the monument which stands in one of the squares in Melbourne, commemorating the event. The "8-8-8" surmounting the shaft signifies eight hours of work, eight hours for rest and eight hours for recreation.

of the votes cast, the lowest candidate is dropped from the running and second and third choice on the ballots cast for him are counted, and so on until some one has a clear majority.

The campaign expenses of candidates for parliament in Victoria are limited to \$1,600 for the upper house and \$600 for the lower. Not only that, but the law designates just what money may be spent for and limits the number of paid workers who may be employed.

The party which has a majority in parliament chooses the Premier. He in turn chooses the members of his cabinet. Four of them must be members of parliament, not more than two being members of the Council, while not more than six may belong to the Lower House. The list must be submitted to the governor, who may veto any of them against whom there is serious objection, but this has never happened. The governor also has the power to veto any legislation passed by parliament, but he never does so except at the direction of the imperial government.

It is when a ministry is defeated in some legislation it proposes that the governor has a ticklish job. In that case the Premier asks the governor to dissolve the parliament and order a new election. If a party is defeated at the polls the whole ministry resigns and the governor names a new Premier, usually the leader of the party victorious at the polls.

As early as 1873, Victoria began legislation for the benefit of the workingman. That year a law was passed forbidding the employment of women in a factory for more than eight hours in a day. This was followed by laws requiring the registration of factories, prescribing measures of sanitation and safety and fixing the closing hours of shops. The state originated the system of wage boards, of which there are now some hundred and sixty, composed of equal numbers of employers and employes, who fix the wages in their respective trades. Child labor is forbidden for boys under fourteen and for girls under fifteen. There is a minimum wage, fixed by law, for all factory employes.

A state labor board is maintained which registers the unem-

ployed and finds them work. It advances money as a loan to workmen who are unable to pay the fare to places where they have found jobs. A workman's compensation act is in effect. The state operates a competitive accident insurance company, insuring the employers against loss under the compensation law. All employers are compelled to take out policies in either the state company or some company approved by the government for the full amount of their liability under the compensation act. The rival companies to the state insurance, some fifty in number, are required to put up cash bonds with the state to insure their carrying out the provisions of the policies they issue. The amount of the bond is increased as the rate increases, which practically compels them to hold to the rate charged by the state.

Before the war Victoria was one of the most active of the Australian states in encouraging immigration from Great Britain and North America. It arranged cheap fares and in some cases paid them in an effort to get the best class of settlers and labor into the state. Since the war, however, it has limited its activities in this direction to the bringing out of relatives of those already in Victoria, and to settling former members of the British naval and military forces upon the land.

Returned soldiers are being given the best lands available



In the British Empire, The Salvation Army carries on its unrelenting war against sin and does much valuable welfare work. It is rendering valiant service in Australia. This is picture of "Army Headquarters" in Melbourne.



The "sport of kings" is decidedly popular in Australia and especially so in Victoria. The picture shows the leaders in a hurdle race at the Moonee Valley race course.



The famous Flemington race course at Melbourne with the race for the Melbourne Cup in progress. This event attracts 150,000 spectators.

in the irrigated districts. The state government has bought many big tracts which the owners were using as sheep or cattle ranges, and has divided them into small farms which are offered to ex-soldiers on the most generous terms. Millions of dollars have been advanced to those who have taken up farms in this way.

An examination of the vital statistics of the state reveals that the birth rate is only 22.29 per thousand of population, that the infant mortality is the greatest of any state of the Commonwealth, and that the death rate of 10.7 per thousand is the highest. At first blush it would seem as if this gave the lie to the boast of Victoria that it has the healthiest climate in Australia. Further investigation, however, reveals the fact that the number of aged people in Victoria is greater according to population than in any other state, and that the deaths among younger people are comparatively few.

Victoria has a well-founded claim to healthiness, and Melbourne in particular is quite proud of the fact that splendid sewerage, pure water, labor conditions and stringent laws concerning contagious diseases have kept its health record high. Death from typhoid fever, diphtheria and tuberculosis, the most fatal ills of a big city, have steadily decreased in the last few years.

Victoria is a wealthy state. The average weekly clearances of the Melbourne clearing house alone is more than \$50,000,000. There are sixteen banking institutions in the state, with a total of about seven hundred and fifty branches. Of



This is a snap-shot of Da Unaipon, an Aboriginal Australian of exceptional intelligence. He is inventor of an improved sheep-shearing machine, an accomplished musician, and his addresses on evolution have attracted much attention in parts of the Commonwealth.

course, the enormous amount of business which is transacted is due largely to the imports and exports of Melbourne, thru the port of which passes most of Victoria's annual export.



The Gorge, on Mt. Buffalo, is one of the scenic attractions of Victoria.
The precipice at the left of the picture has a sheer drop of 1,700 feet.

CHAPTER VIII

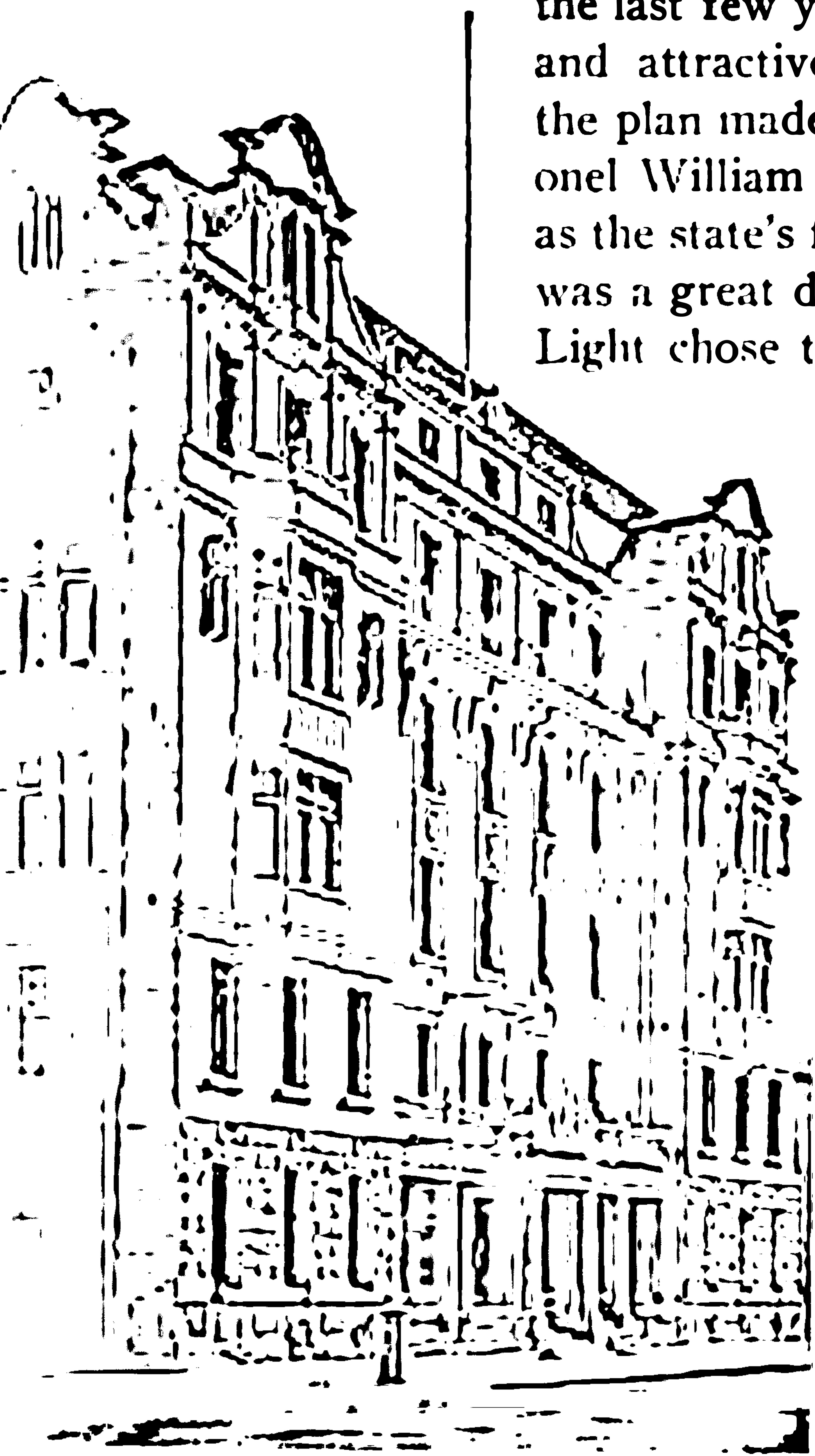
SOUTH AUSTRALIA

WHEN first you step off the train in Adelaide, capital of the state of South Australia, you are impressed with the fact that here is a modern city. It is somewhat of a surprise, then, to learn that Adelaide was not laid out within

the last few years, and that its broad streets and attractive squares are fulfillments of the plan made eighty-five years ago by Colonel William Light, sent out from England as the state's first Surveyor General. There was a great deal of objection when Colonel Light chose the site for the future capital,

but residents of Adelaide are today inclined to bless his foresight.

He laid out a tract of land over a mile square, and all around it he reserved a strip of woodland for park preserves, which now are splendid breathing spots for the population of 50,000 in the city proper and four times as many in the suburbs. These park lands total 1,900 acres, while the area of the land enclosed by them is 1,042 acres. Thru the center of the city runs a pleasant little stream, the River Torrens, which effectually divides the business



Educational Building, Adelaide.

part of Adelaide, south of the river, from the residential section.

Adelaide is 35 degrees south of the equator, about the same distance that Memphis, Tennessee, is north of it. It is six miles from the Gulf of St. Vincent and hemmed in by the mountains of the Mount Lofty range. So it was no surprise to find it warm there, even in March, but it was somewhat staggering to find the thermometer at 110 degrees in the shade and 30 degrees hotter in the sun. This was in Australia's midsummer month, our midwinter. Residents assured me that this was unusual.

At night the mosquitoes attacked us in swarms, and it was a case of cover up your head with a sheet or be unmercifully stung. By day the annoyance was kept up by droves of flies. The people of Adelaide protect themselves by veils or nets around their hats, but the newcomer is well bitten before he



King William Street is the principal thoroughfare of Adelaide. This South Australia city is an example of city planning. The man who laid out the city in 1839 visualized the future and provided for wide streets. For the city proper, he laid out a section one mile square, and bordering on this, forest lands were reserved for playgrounds for the people of the future.

adopts the head nets or seeks refuge in a generous anointment of oil from the nearest drug store.

King William Street, the principal business thorofare of Adelaide, is as fine a street as one could wish to see. It is 132 feet wide and is lined with splendidly kept stores and business buildings. The business portion of the city lies within four wide spaces, or terraces, facing the cardinal points of the compass, and all the streets meet each other at right angles. In Victoria Square, one of the principal squares, one finds most of the buildings in which the offices of the state government are housed. Several blocks north, at the end of King William Street, is the Governor's city home, surrounded by a park. Near by are libraries, museum, art buildings and other structures which have caused Adelaide to be called "the Athens of Australia."

It is hard to realize that in the early days the city was divided into acre lots, which sold at the price of three dollars each, every purchaser being limited to one lot. The site on which the town hall now stands was bought for that price in 1840. Today it is worth \$260,000.

The people you meet on the streets of Adelaide are a diversified lot, and an ancient "sundowner," or tramp, from the bush and desert districts, is not uncommon enough to attract attention. He comes into town with his "swag," or bundle of clothing on his back, and a tin pail in his hand for the boiling of tea. A battered slouch hat shields his weatherbeaten face and a long growth of shaggy whiskers rambles down his vest front. He has come to town for a few days of carousing before he again takes to the wilds.



The sundowner, a picturesque pioneer who plays his part in the development of Australia.

At certain seasons, just before the beginning of winter especially, whole tribes of blackfellows visit Adelaide to get the blankets which the government gives out. They might just as well receive these blankets on the reservations, which are maintained for them, but many of these aborigines still live in the wild places from choice and prefer a trip to the city, even tho it involves many weary miles of trudging on foot.

As I drove thru Adelaide in a motorcar on the way to the country I was struck by the fact that the homes are of brick or stone and not of wood. This is the result of a law which forbids the erection of a wooden structure inside the limits of the city proper. The heat is usually so great and the rainfall so light—twenty inches a year and most of that in the winter—that wooden buildings are considered too great a fire menace. I noticed, too, that corrugated iron roofs are scarce and that tile is more favored. This is probably due to the fact that the making of brick, tile and pottery are important South Australian industries. Stone, too, is plentiful and many houses are a combination of stone and brick. The California bungalow type of house seems to be the favorite and a majority of homes have nice front gardens and hedges.

The streets of Adelaide are well paved with asphalt or wooden blocks, and most of the roads in the surrounding country are excellent. They lead to splendid dairying, vineyard and orchard farms, and it was our pleasure to see on this trip what is called the best Jersey herd in the state, at Linden Park, the country estate of Mr. Peter Wood. The herd boasts both past and present state champion milk cows and the best show cow in the state.

A stretch of broad asphalt road six miles long brings you to Port Adelaide, on the Gulf of St. Vincent, the place thru which South Australia ships the bulk of its exports of \$50,000,000 a year and receives its imports of \$26,000,000. Until 1908, the facilities at Port Adelaide were inadequate. Big ships were forced to discharge their cargoes by lighter. Today they can come right up to the wharfs, which have a total length of 3,200 feet and are built on what is known as the Outer

Harbor, with an entrance 499 feet wide. The smaller vessels come into the inner harbor, which in reality is the mouth of a river which some of the early settlers characterized as a "miserable little creek." Since those days it has been dredged out until it can be used by all but the largest vessels.

To Port Adelaide and to half a dozen other suburbs there is maintained splendid street car and suburban train service. The street cars are modern affairs which only a few years ago displaced the horse-drawn cars, first to give a service of this kind in Australia. Power is obtained from the plant at Port Adelaide, which supplies "juice" thru two stations that can be operated together or separately.

It is said that few of the 260,000 persons in the metropolitan area of Adelaide and its suburbs need walk more than a mile before they can get a ride into the city. The street car service is operated by the Tram Trust, as it is called, and is governed by a board of eight members, two of whom represent the state government and the others the city and suburbs.

Adelaide's city government is headed by a lord mayor, six aldermen and a dozen councilors from the six wards of the city.

One thing I noticed in Adelaide was the large number of children and old persons. Three facts to be found in the government statistics explain why. South Australia leads the Commonwealth in the percentage of marriages; its death rate is low—at one time the second lowest in the world,—and its birth rate is around 25 per thousand of population.

Weddings are so numerous in Adelaide, I was told, that almost every motorcar which is for hire is either white or cream-colored. The first auto owner who had white cars found they were in such demand for weddings that he was in a fair way to get a monopoly of the business. So other taxi owners painted their cars white, too, and they have been doing it ever since.

But even tho autos are plentiful and rates reasonable, the average resident of Adelaide seems to prefer to ride in an old-fashioned carry-all, such as used to meet the trains in the



Many of the early explorers in South Australia were sorely displeased by the fact that some of the lakes which they found were salty. That salt now is the basis of one of the greatest industries of the state, which supplies virtually all of the salt for the Commonwealth and furnishes some for shipment abroad. The picture shows piles of salt reclaimed from one of these lakes.

villages of the United States. They struck me as queer vehicles to be on the streets of so progressive a city, especially since most of them are drawn by diminutive ponies, which seem all the smaller when hitched to such big vehicles.

When it was decided, in 1834, to establish a colony in South

Australia it was proposed to make it a model affair, which should profit by the mistakes made by other settlements. For one thing, there was a keen desire on the part of many British to have one of the settlements of the new land consist of free inhabitants only and to forbid convicts from being sent there when they were deported from England, or from coming there after they had served their term in the penal area.

There was, also, another scheme of making South Australia a replica of England in that there should be a leisure class of gentlemen and land-owners, with servants and laborers who should be prevented from becoming independent by putting the price of the land there so high that the laborer could not afford to buy it and so set up for himself. This scheme was carried out in part, in that it was ordered that no land should be sold for less than twelve shillings (three dollars) an acre. The receipts from the sale of this land were put into a fund with which it was proposed to bring out from England a selected class of immigrants.

South Australia was declared a province of Great Britain in 1836, two years after the passage of the act which founded it as a colony of the empire. Right at the start there was a mix-up because authority was divided between a board of eight commissioners and the governor, and when, in 1840, the colony was refused self-government it was because of hopelessly bad financing, which had made it bankrupt. It was spending six times as much as its revenue and its people were importing ten times as much as they were producing.

England delivered a master stroke when it made Captain George Gray the new governor of the colony. He chopped expenses, cut wages to a minimum so as to drive the laborers out of the city and onto the farms, and compelled the rich land-owners to sell land cheaper than the governor was allowed to by law. Then England paid up the debt of the colony and gave it a small share in its government by means of elective councilmen. The colony was told that when it could pay its own way, and when it had 50,000 people, it could become self-governing. By 1849, or twelve years after the first start, both



This is a picture of one of the gold mines in the "Golden Mile" of Western Australia. A grocer of Adelaide was attracted by the gold rush to Western Australia in the eighties, but arrived too late to get in on the ground where the first gold was found. Three miles away he located a claim and started to work, much to the amusement of old-time miners. But he had the last laugh, which was the best laugh. Up to 1898, when working the mines to a greater depth became unprofitable, alluvial gold valued at \$125,000,000 had been taken from the Golden Mile, the district located by the Adelaide grocer.

conditions had been fulfilled and South Australia became a state.

In the years prior to 1900, when the six states of Australia became united in the Commonwealth, South Australia was one of the most ardent advocates of the plan for federal government. Since that year no state has been more ready to uphold the national government or freer of the jealousies that have always existed in Australia.

Today, like all Australian states, it is under a governor named by the crown, but it is really governed by a premier and his ministers of departments. Its legislation is taken care of by a parliament of two houses—an assembly of forty-six members, elected one from each of the districts of the state, and a legislative council of twenty members, four from each of the five main divisions of the state. The fourteen cabinet

portfolios are held by members of one house or the other. South Australia was the first state to pay the members of its parliament; the councilors receive \$800 a year and the assemblymen \$2,400. Since 1896 women have been voting for members of parliament.

Since South Australia gave up control of Northern Territory in 1911 it has had an area of 243,244,800 acres, of which more than half is occupied. Because of its peculiar situation in the central-southern part of the Commonwealth, it is the connecting link between the east and west coasts. It is virtually impossible to cross Australia at any other part because of the great desert which lies to the north and west.

South Australia's claim to fame lies in the fact that it was the first Australian state to tax unimproved land values; to grant suffrage to all men; to give women the vote; to adopt the secret ballot, which is now used in the United States under the name of the Australian ballot; to put into effect the Torrens system of land registration, by which title is always kept up; and to build the first line of railroad in the country. Both the Torrens system and Australian ballot were adopted in the United States after Australia had tried them out.

That its people were progressive was indicated early in the history of the state. Realizing the wonderful possibilities of its rich lands, they arranged for the bringing overland of cattle and horses from New South Wales—over trackless mountains, thru unknown forests and across strange rivers. It was the occasion for a great celebration when the first herd, numbering 335 head, made this dangerous trip with the loss of only four animals. From this humble beginning has grown the pastoral industry of the state, which now totals 270,000 horses, 350,000 cattle, 80,000 pigs and 7,000,000 sheep.

In spite of its richness of soil and favorable farming conditions, South Australia has the same problem which confronts its sister states—getting more of its people into the country. Of the population of 470,000, more than half, or 256,000, are to be found in Adelaide and its suburbs.

This flocking to towns and letting the country go hang



This picture shows 250,000 bags of wheat in storage awaiting shipment at Wallaroo, South Australia.

seems to be an Australian characteristic, but nowhere is it shown more than in South Australia. The state government has done many things to encourage a drift away from the cities. Its land laws are more liberal than those of any other state. It offers good land at reasonable prices, either on lease with the right to purchase, or by outright purchase, in which case it gives forty years in which to pay and makes exceedingly easy conditions for the settlers.

In 1908, the State Parliament passed an act permitting the government to make advances to settlers who hold leases on crown lands or who have signed agreements to buy such lands. Advances are made for the purpose of clearing land, purchasing stock or for taking up mortgages held by private persons. Repayment of these advances, which are limited to \$3,500 to any one settler, is extended over thirty years. Loans are also made for the erection of fences against the inroads of rabbits, which are greatly destructive to crops here, and for dog-proof fences in pastoral regions, where hordes of wild dogs have in the past caused great losses in sheep and cattle.

Thru the state bank, founded in 1895, loans are made to farmers to the extent of three-fifths of the value of their land

and improvements. Workers who desire to own their homes can obtain advances from this bank under a law passed in 1910, which limits such loans to those whose incomes are not above \$1,200 a year. The bank had outstanding, in 1921, \$5,000,000 in advances to settlers and \$8,000,000 to builders of homes.

The state government maintains a splendidly equipped agricultural college thirty miles north of Adelaide, and there are three experimental farms in different sections where rainfall and other conditions make necessary varied methods of farming. The college has a staff of experts with whom farmers may consult on their problems, and a bureau for soil and seed analysis is maintained.

In spite of its big city population, South Australia claims it is the agricultural paradise of the Commonwealth. It has 2,500,000 acres in grain, mostly wheat, 60,000 acres in vineyards, gardens and orchards, and 1,500,000 acres either lying fallow or sown in grass—a total of more than 4,500,000 acres under cultivation.

As early as 1851, wheat from South Australia took first prize in competition with the wheat of the rest of the world. The wheat yield of the state has averaged more than 24,000,000 bushels a year for the last ten years. The average yield per acre—ten and a half bushels—during that period does not look high in comparison with the average yields of America and the Argentine Republic, but the extremely low cost of producing wheat in South Australia must not be forgotten.

To get into the real wheat-growing belt of South Australia, you go north out of Adelaide to Petersburg, where the railroad that runs to the Broken Hill mines, just over the New South Wales border, connects with the north and south line between Port Augusta and Oodnadatta. Petersburg is the place thru which most of the South Australian wheat passes on its way out of the back country. Along the railways which cross there you see big stacks of wheat in sacks awaiting their chance to go down by rail. The sacks are covered with corrugated iron against the weather. That is the way Australian

wheat is handled—in sacks. At one or two ports grain elevators have been tried out, however, and others no doubt will speedily follow.

Around Petersburg there is an annual rainfall of thirteen inches, and by the addition of phosphates the ground will yield up to twenty bushels to the acre. But farther north, where the maps used to show a desert which the early explorers branded as unfit for cultivation, there has come about a great transformation thru the discovery that underneath thousands of acres of land there lies a vast supply of water, which has soaked thru the porous soil and been caught by the rock strata eighty to two hundred feet below.

For real dry farming, however, the people who live on Yorke's Peninsula, which juts out of the South Australian coast line like a huge boot, take the prize. The rainfall there is slight, but the limestone soil is well adapted to wheat-growing and the peninsula farmers have learned how to make their land produce as high as thirty-five to forty bushels to the acre.

A large part of South Australia is well adapted to the raising of sheep and cattle. Its pasture lands are rich with grass and fodder available the year around. There is no severe winter weather as the United States and Canada know winter. Snow is to be found only in the highest parts, and the winter months mostly are rainy and without the cold which requires the putting up of stock and feeding it in barns. Many farmers combine wheat-growing with the raising of sheep and dairy cattle, and this has given rise to a large export trade in sheep, mostly lambs.

There was a time when the price of wool was off and sheep were almost a pest in South Australia. There are instances where whole flocks were slaughtered because it cost more to keep them than their wool would bring. Then New Zealand made a success of shipping frozen meat to England, and Australian sheep-raising again became profitable. In 1919 over \$18,000,000 worth of wool was exported from South Australia.

Co-operative butter and cheese factories are to be found all

over the state. In connection with the state produce department at Adelaide the government maintains a butter factory, which buys the cream direct from the dairies. Much butter is shipped to England each season.

White Leghorns are the most favored chickens in the state, and the breed has been brought nearer perfection here than in any other part of the world. As a result the state is the greatest exporter of poultry and eggs in the Commonwealth.

This produce, like all others of the kind, is handled thru the state, which has erected at Adelaide freezing, canning and preserving works, a butter factory and a by-products factory.



Hundreds of miles of these concrete-lined channels carry the waters of the Murray, longest river in Australia, into the arid lands which otherwise would not be productive because of the scant rainfall. This channel is part of the extensive irrigation system in the Berri district, noted for its splendid fruit. The state, which is back of all irrigation projects, builds dams and reservoirs and digs channels, and charges settlers for water equaling twenty-four inches of rain a year.

The produce department will undertake to ship and sell in London, thru a trade commissioner, all of the produce which the farmers do not dispose of by other means. It will take the live sheep, kill and freeze them and sell the meat and wool and by-products. The state freezing works have a capacity of 8,000 head of sheep a day, and a cold-storage plant where 200,000 carcasses can be kept at a time.

If the farmer is hard up the department will advance him money on the produce entrusted to it for sale. This advance usually is three-fourths of the estimated market value.

Practically every fruit of the subtropical and temperate places of the earth thrive in South Australia and its hills produce fruits of North America which look and taste equally as good. Its grapes, both white and blue, are delicious; its apples, peaches and pears have a splendid flavor. In the irrigated districts of the Murray River, fruit-raising and drying is the basis of one of the largest export trades of the state. Apples and oranges, particularly, thrive there.



For a thousand miles, part of the year, the Murray River is navigable in South Australia and New South Wales. Boats drawing only a few feet of water do a large business.

Wine-making is one of the big industries in South Australia, both blue and white grapes being used. Saloons in the state are required to close at six o'clock in the evening and as a result there is a growing industry in unfermented wines, grape juice and other fruit flavorings for soft drinks.

South Australia has one industry which is peculiar to that state, the growing of the wattle tree, a species of eucalyptus, for the sake of its bark, which is largely used in tanning. So valuable is the bark that immense tracts of land unsuitable for agricultural purposes have been cleared of scrub and planted in wattles. In many parts of the state the wattle grows naturally and no expense is incurred for planting or cultivation. Where the wattle is planted the trees are fit for stripping in from five to seven years. The bark brings from \$25 to \$35 a ton. Altho large quantities are used in the local tanneries, much bark is shipped to other states or overseas.

One of the big agricultural projects in South Australia is the development of irrigation in the Murray River district. This is one of the most comprehensive schemes of its kind south of the equator. The Murray is the largest river in Australia. It starts from the snow-clad heights of Mount Kosciusko, 7,256 feet above sea level, in New South Wales, and wanders along for 3,212 miles, the last 500 miles in South Australia. For a distance of 1,750 miles it is navigable part of the year.

In South Australia, the Murray offered a double problem. It runs thru low-lying country and on either side great areas of land were unsuited for anything. Beyond these marshes were great tracts of land which would prove most valuable for agriculture if they but had some of the water which was going to waste along the river. So the government went to work to do two things—reclaim those lands which were under water and take the water and put it where it would be of some use. For many miles along the Murray dikes were thrown up on the banks of the river channel and then the land behind these dikes was drained.

Then the government established reservoirs and into them



Horses are in such demand in many parts of Australia that bullocks are used a great deal for hauling. The picture shows a wagon load of white grapes being delivered at a crushing plant. From the sides of the vats in which the juice is treated flakes of cream of tartar are chipped, a by-product of the wine industry. Refuse from the crushing machines goes back to the land as fertilizer. South Australia is noted for its Adelaide malaga grapes.

pumped water from the Murray. At frequent intervals these reservoirs are emptied into concrete irrigation canals which are spread in a network over the arid areas. It is estimated that the water supplied is equal to twenty-four inches of rainfall a year. These lands are given out under perpetual lease in blocks of ten to fifty acres, and 100 acres of high land suitable for sheep is given to the holder of each block.]

Perhaps no spot of the state is richer than the southeastern portion, where exceedingly heavy crops of potatoes, onions, cereals and fruits are gathered. Unfortunately, the land is subject to floods, but the state government is spending more than \$1,200,000 on a drainage scheme that will rid the land of its surplus water and open thousands of acres for occupation.

In what is known as the Pinnaroo district, toward the Victorian border, it once was thought that there never would be any agriculture. There are no rivers there, not even streams that can be dignified by the name of creeks, but water was found not more than 200 feet under the surface, and what was thought to be a desert now is a country of tanks and wells

—and wheat. “Ninety Mile Desert,” so called, is ninety miles long by fifty wide and has almost 3,000,000 acres, which have been made subject to cultivation by boring for water and finding it. One man tried to raise wheat there in 1896 and succeeded. Others have followed him and it is only a question of time till the whole of that country will be producing wheat. A railroad runs there now, a sure sign that South Australia places great faith in the future of that once deserted district.

Eyre’s Peninsula, too, has two lines of rails, which tap a country that has been proved to have water at shallow depth. More than three-fourths of the peninsula’s 15,000,000 acres can be made to produce wheat, the experts say.

Until 1911, the state of South Australia handled the affairs of the Northern Territory, which is directly north of South



A South Australian grape arbor from which grapes are picked by the wagon load.



One of the co-operative butter and cheese factories of South Australia.
Butter is a staple export from this state to England.

Australia. Northern Territory had been explored and opened up by McDougall Stuart, a South Australian, and the state was very jealous of the efforts of Queensland to handle the territory. So when, about 1870, it was decided that direct communication with England by wire was desirable, South Australia set out to build the telegraph line that should connect the cable end with the populated southeastern corner of Australia.

A cable had just been laid between the United States and Europe. It was proposed to connect England and Australia; already a cable had been laid between the continent and Java. Naturally it would touch Australia on the north when extended, as that was the shortest distance and permitted of the use of the most land wires, cheaper to build and maintain. So South Australia started in to build a telegraph line from Port Darwin, capital of the Northern Territory, to Adelaide, work being done at both ends along the route which Stuart's explorations had taken. It was a gigantic undertaking, for much of the country was unknown. It was difficult to get supplies to the laborers and hostile blacks were to be reckoned with. Finally, however, the 2,000 miles of telegraph line were completed at

a cost of \$2,000,000 and met the cable at Port Darwin. And this was at a time when the colony of South Australia did not have more than 200,000 people.

It is along this route that it is proposed to build the railway which will cut Australia from north to south, its southern terminus being Port Augusta and its northern end Port Darwin. South Australia has shown its desire to help build this line by giving to the commonwealth government 624 miles of state-owned railways between Port Augusta and Oodnadatta, near the Northern Territory border, and more than half a million square miles of adjacent lands. By utilizing this railway the Commonwealth will be able to construct the north and south railway across Australia at its narrowest point.

Today, this north and south railway ends at Oodnadatta, an insignificant little village in appearance, but in reality important, for it is from there, or rather from Hergott Springs, near there, that the camel trains outfit for the long journeys across the desert to the "back of beyond" country. It has long been a matter of record that a camel can go many days without water and in Australia they have been known to go serenely along for fifteen days over 359 miles of desert and not display undignified haste to drink at the conclusion of the journey.

While we were in Adelaide an advance party was sent out with camel trains and donkeys to traverse the route and leave gasoline for motorcars which later were to convey a royal commission of engineers over the route before final decision on the rail route is made.



Maid of Linden, champion milk cow of South Australia, is a 6-year-old Jersey, owned by Mr. Peter Wood of Linden Park. His herd included the present and past champion milk cows of the state. This cow, 125 days after calving, was giving forty-two pounds of milk a day.

South Australia has been noted for its railroad building. It laid the first stretch of state-owned tracks in the British Empire. The lines now open for traffic in the state are 2,242 miles long. The most difficult feat of railroad building in the state was the line which connects Adelaide with Melbourne. Adelaide is surrounded by hills, the Mount Lofty range, and to get the railroad thru them it was necessary to bore nine tun-



An ironstone quarry in the Iron Knob Mountain. Both the Iron Knob and the Iron Monarch mines are owned by the Broken Hill Company and the ore mined there is shipped by private railway to False Bay, then by steamer to Newcastle, where it is used in the Broken Hill Company's great steel plant.

In the northern part of the state of South Australia there is little water along the routes which must be taken to reach the backblock stations whence comes much of the wool grown in the state. It has been proved that camels are the best means of transport in this dry country, so large numbers of these animals have been introduced with their Afghan drivers. They carry supplies from the railroad to the settlers in the back districts and bring out the wool. Camels in some of these caravans have been known to go as many as fifteen days without water and they proved invaluable to the railroad builders who put in the lines across the South Australian deserts.

nels and build an iron viaduct over a gorge that is 620 feet across. The road is now operated jointly by the Victorian and South Australian governments.

From Port Augusta, where the South Australian railway ends, starts the commonwealth-owned transcontinental

stretch of railroad which connects at Kalgoorlie with the lines to Perth, on the west coast. It is 1,963 miles long and was built under great difficulties, because for hundreds of miles it crosses the desert. One stretch of it runs for 300 miles in a straight line without a single curve. Its completion linked the capitals of all the states by rail.

South Australia showed enterprise, too, when it built a railroad northeast across the border of New South Wales and made it possible to bring out the product of the great Broken Hill silver-lead mines, which is smelted at Port Pirie.

Mining plays a large part in the industry of the state, and its great copper mines have long been famous. The Kapunda mines, discovered in 1842 and closed down in 1878 by a large influx of water, are to be reopened in the belief that great bodies of ore are still to be found there. Before they shut down they had produced more than \$4,000,000 worth of copper. Almost five times that amount was produced by the Burra Burra mine before it was closed down. When capital is available it is believed that Burra Burra also may come back again. Two big copper mines, the Wallaroo and the Moonta,

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discovered in the early sixties, still are being worked and have produced some \$60,000,000 worth of copper. Ore from both these mines is smelted at Port Wallaroo. There are copper mines at a number of places in the Flinders range, and the completion of the transcontinental railway has opened the way for the shipment of ore from the Mount Gunson mine, near Port Augusta.

Two almost solid mountains of iron ore, Iron Knob and Iron Monarch, are owned by the Broken Hill Company and the ore is shipped by the company's private railway of thirty-six miles to False Bay and then conveyed by steamer to Newcastle, on the east coast, where it is smelted and used in the great steel plant of the Broken Hill concern.

South Australia is the principal producer in the Commonwealth of salt and rock phosphates, and possesses the only radium mines being worked in Australia. High-grade gypsum, granite, freestone, slate, marble, and ochre for the making of paint, are other minerals which have been discovered in the state and are being mined. Gold is found in South Australia in small quantities only, when compared with the production in other states, but a fair quantity has been obtained from reefs in the Mount Lofty range and from some alluvial deposits. The government has lent assistance to the companies which are working the reefs, by erecting batteries and cyanide plants at four locations.

Little coal is to be found in the state, and indeed there is no great demand for it as fuel, for it has been found that the mallee tree, a scrubby species of gum, is almost as good as coal. The trees, which are crooked, knotty and unfit for use as lumber, are sawed into convenient lengths and shipped to towns and cities. Later, when the farmer is ridding his land of stumps, he finds that he has another source of revenue in them, for they are much in demand as fuel for factories and other industries. All along the railway lines I saw great piles of mallee stumps.

Perhaps the fact that South Australia has the most thrifty inhabitants of the Commonwealth is accounted for by the fact

that it has, since 1848, maintained a savings bank as a state institution, with twenty-six branches in the principal towns and almost 300 agencies in other places. Deposits may be transferred free to this state savings bank from all other savings banks in the Commonwealth, and those who have money on deposit in the British postoffice savings bank at "home" may have their accounts transferred without charge if they go to South Australia. (The latest available figures show 321,000 depositors with deposits totaling more than \$50,000,000, an average of almost a hundred dollars for each inhabitant of the state.)

(Education is well taken care of in the state. Children from seven to thirteen years of age are required to attend school, which is free and non-sectarian. Tuition in the secondary or



Silver lead bullion piled up on the wharf at Port Pirie, South Australia, where all of the ore from the famous mines of the Broken Hill Company is smelted. Broken Hill lies just over the border in the state of New South Wales, but South Australia built a railroad to tap these mines and as a result a South Australian port is credited with the shipments of the bullion.

high schools also is free, and it is possible for a student to pass thru the primary and high schools, and, by means of scholarships, thru the university, without extra cost to his parents. The government alone offers more than ninety scholarships.

Like other Australian states, South Australia now spends more than its revenue each year—an average deficit of about sixty cents for each inhabitant. Until 1914, when the great war began, it had a surplus each year, but since that year there has been but one year, 1917-18, when it came out on the right side.

It owes \$170,000,000, an average of almost \$375 for each inhabitant (the United States owes \$400 for each person), but it must be remembered that Australia's war loans were tremendous, and that South Australia is in debt for its proportionate share. It operates its state-owned railways and businesses at a profit, but during and since the war it has increased taxes more than fifty per cent without making ends meet. It is, however, a matter of but a short time until South Australia will once more be living within its means.

To get a complete line on the production, soil and climate of Victoria, New South Wales and South Australia, you must read what I report on the other states together as they are much more alike in Australia than in the United States.

CHAPTER IX

WESTERN AUSTRALIA AND NORTHERN TERRITORY

IF YOU land from the west you will first set foot on the Commonwealth in the state of Western Australia.

In the great museum at Amsterdam, Holland, are two plates—common affairs of tin, such as you will find at any

picnic party — which should be given a place of honor in some Western Australian historical exhibit. They prove that Dick Hartog, a Dutch adventurer, was about the first white man to set foot on Australia. On one of these plates he scratched his name, the name of his ship and the date, and nailed it to the trunk of a tree on the inhospitable coast of what is now Western Australia. Many years later another Dutch explorer came along, found the plate and over it nailed one of his own, also properly inscribed.

Neither of these men had any idea of the immensity of the land they had discovered. Nor did William Dampier, an



A pearl diver ready to be lowered into the water. A pearl, valued at \$30,000, was found off the Cape Lighthouse in what is known as a blister in mother-of-pearl. Opening, paring and investigating is tedious work and, quite often, fruitless. The shell cleaner to whom was intrusted this particular job was discouraged and wanted to quit. Continuing, however, he was rewarded with a pearl of surprising value.

English buccaneer, who came along in 1688, mapped the coast line and sent out parties to explore the interior. The forbidding coast and the desert beyond it resulted in a report that the land was "the most miserable on earth," and inhabited by a race of black savages hopelessly hostile. The same view was expressed by the explorers who came after, and the country was left severely alone.

Today, Western Australia occupies nearly one-third of the continent of Australia; it is as large as all of the United States east of the Mississippi River, yet its population of 340,000 is less than that of Vermont. Of that population fully forty per cent live in the city of Perth and its surrounding small towns.

The British flag was hoisted over Western Australia in 1821, but it was not until 1829 that it was formally annexed by the British Empire. Its story is a good deal like that of our own California, whose "forty-nine" has its duplicate in the "roaring nineties" of Western Australia. It was in 1887 that gold was discovered, but the boom really started with the sensational finds at Kalgoorlie and Coolgardie. It was then that the land of "sin, sun, sand and sore eyes," as it had been nicknamed, came into its own. Hitherto unknown, she became famous almost overnight. The "gropers," as the native-born whites are called, were forced into activity by the coming of the "tothersiders." The state was given a government of her own, and her greatest son, John Forrest, later Lord Forrest, the only native-born Australian to attain the peerage, was made Premier. It was due largely to Forrest's ability to see into the future that a bold standard of development was adopted. Within four years after the Coolgardie discoveries a railway had been pushed along the 350 miles from Perth to the mining camps.

I was greatly amused at the story told me of the discovery of gold. A cattleman, riding range in the highly mineralized district of Roebourne, picked up a rock to throw at a crow. The unusual weight of the stone impelled him to look at it closely, when he found that the lump was a nugget of almost pure gold. When he reported his discovery an incredulous

official merely asked: "And what became of the crow?"

A grocer of Adelaide, South Australia, who was attracted by the gold rush but who came there too late to get in on the ground where the early discoveries had been made, located a claim some three miles away. Old-time miners laughed at him, but he set to work on it. Their laughter did not last long. He had discovered what afterwards came to be known as the Golden Mile, and from which, up to 1898, when the great depth made working unprofitable, alluvial gold valued at \$125,000,000 had been taken. Contrasted with his luck is the fate of Paddy Hannan, the prospector who found the first gold—he is today a pensioner of the state!

The sites of these great mines did not greatly appeal to me—barren, sandy deserts, with a sun that blisters and tortures, where a whole year's rainfall may be precipitated in one day, or where years may go by without enough rain to wet the ground. Getting water to the mines was the great problem in those early days, but even tho Western Australia had at that time only 127,000 people she set about the ambitious scheme of bringing water from the coast, 351 miles away. The result was a steel main, thirty-three inches in diameter,



A group of mines in the Golden Mile district.



The tailing dump and elevator of the Great Boulder mine in the Golden Mile district.

thru which the water takes a month to travel and is then raised 1,290 feet and emptied into a reservoir with a capacity of five million gallons. It cost twelve million dollars to build that water line, but it supplies water to consumers at 75 cents per 1,000 gallons, where the former price was \$12.

Many of the mines have of course played out, and more recent discoveries have not proved bonanzas, but I have run across many well-informed mining experts who believe that some day Western Australia will again have a boom in mining, and that her vast riches did not play out with the decadence of Kalgoorlie and Coolgardie, where the rich alluvial deposits almost at the surface have been replaced by lower-grade drifts as the mines have been sunk deeper and deeper. That the state government also shares that belief is evidenced by the fact that it has established twenty-eight batteries where miners may have their ore tested. Even today, however, with her dwindling mining activities, the state produces more gold than all the rest of the Commonwealth combined; up to December,

1920, nearly 34,000,000 fine ounces, valued at half a billion dollars, had been produced.

But gold is not the only egg in the mining basket of "Wes-tralia," as the state has been nicknamed. In addition, she produces copper and lead, silver, tin, zinc, asbestos, iron, antimony, manganese, graphite and other minerals. At Yampi Sound a field of more than a hundred million tons of rich iron ore has been located, and not long ago new seams of coal were found in the already extensive Collie fields.

With the development of mining has gone hand in hand the building of railroads. This work has been complicated by the fact that so much of the state is a desert—over 800,000 square miles of the land has a population of less than one thousand. Rails and supplies, and, above all, water, had to be transported great distances. Camels were the only beasts of burden which could be used for the arduous, waterless trips. Even today these patient beasts are used in the sandy out-spaces at the rail-ends. I found it an interesting sight to see them plodding along with their loads of food and water for the missions and stations.

A dozen or twenty even of these ships of the desert there may be in a train, driven by a few silent men, whose faces are



As prospecting and mining became less profitable in Western Australia, men turned to farming, and the agricultural wealth will in time surpass the mineral wealth. This picture was taken on the state farm at Narrogin.



A herd of cattle on the state farm at Brunswick.

wrinkled and whose eyes squint from the constant glare of sun upon sand, relieved only by mirages of lakes and streams which they know are not there. I enjoyed watching the faces of those in our party who had never seen a mirage before as they discovered that the alluring streams, which they were so willing to bet lay just beyond, faded into stretches of sand as we approached.

Some idea of the region may be gained from the fact that the transcontinental railroad across this desert was laid out with a compass, and that for the greater part of its length no surveyor's level was needed. For one stretch of over three hundred miles there is neither a curve nor a grade. It is a dreary, monotonous trip for those who depend on scenery to relieve the tediousness of train travel.

While the mining industry has waxed and waned, agriculture, like the railroads, has moved steadily forward. The early settlers, the gropers, those who had come before the influx of miners, soon found that it was just as profitable to raise food to sell at high prices as it was to follow the none too sure lure of the pick and shovel. But it is only within the last fifteen years that the full possibilities of the land have been realized. Up to that time the state did not raise enough wheat to supply its own small population. High averages, however,

resulted in more and more encouragement being offered settlers by the government.

In the early days, the so-called dry areas presented seemingly insurmountable difficulties to the man in search of raw land for himself. The ones who did take up land, however, found that if they worked, and used their heads, they could make it pay. However, Western Australia still is a country of large holdings; official figures show that one hundred persons hold between them forty million acres, most of which is devoted to cattle raising.

One outstanding feature of the land in the dry areas, the finest part of the wheat belt and the part where dairying is advancing, is its wonderful recuperative ability. The disastrous season of 1914, for instance, which was felt all over Australia, reduced the yield to less than two bushels of wheat to the acre, yet the very next season brought a record harvest of ten and a half bushels to the acre. Since the war the average yield of the state has been around the ten million bushel mark.

In 1921 more than seven million acres were being used for agricultural and pastoral purposes, over a million and a half

Settlers in the tropical Northern Territory of Australia, the only district which has not attained to statehood, have two pests to fight—ants and flying insects—and foil them by building their houses on stilts and inserting a tin between the piles and the floor of the house. Insects are kept out and the houses kept cool by sides of reeds fastened to light wood frames. Roofs, as elsewhere in Australasia, are of corrugated iron. The same material is used for the ever-present water tank.

being under crop. The state has just reached the point where she can begin to dispense with the huge quantities of dairy produce, potatoes and such, which she has been getting from the other states.

Early in her history Western Australia was free of the rabbit pest, just as now she is free from the English sparrows, which are so troublesome in the eastern states. It was felt, however, that it was only a matter of time before the rabbit would arrive, so the government attempted to block off the state with rabbit-proof fences before the pests showed up. Some two thousand miles of fencing was built, at a cost of a million and a quarter, one fence extending from a rocky cliff on the south coast right across the continent to the north coast; later two other fences were built west to the Indian Ocean. Even at that, today the bunnies are to be found on both sides of the fence.

The land laws in Western Australia are probably more generous to the settler than in any other state, and there is much rich land which may be obtained free here which in other states would cost a large sum per acre. In fact, the government is so anxious to attract settlers that 160-acre farms are offered free except for the small fee for surveying and registry. The State Agricultural Bank will advance up to \$8,000 to settlers. This, in connection with the policy of pushing railroads into the new farming sections, is expected soon to bring the desired population. The artesian well, or "bore," as the Australians call it, is practicable over thousands of square miles, which await only the coming of the settler to make productive.

One other thing is needed—a great port from which the products of the interior may be shipped. The best available harbor is at Fremantle, twelve miles from Perth, the capital, and that in the beginning was only a sandbar-locked river mouth. The task of building the harbor was given to C. Y. O'Connor, an engineer of ports, and to whom must be given credit almost equal that accorded Lord Forrest as a builder of the state. Engineer O'Connor, at a cost of \$7,500,000, creat-



A view of Fremantle harbor.

ed a splendid harbor. Today Fremantle is a pretty little city of 20,000, a summer resort and the port at which most travelers from Europe first touch Australia. But the coast line of the state is long, and there is felt an urgent need for another port, against the day when the hinterland becomes developed; search is even now being made for a practical location.

“How long is the coast line of Western Australia?” I asked an enthusiast who had been telling me about the state.

“I’m blest if I know,” he admitted, so I set to work to dig out the information for myself. After looking thru all the available books on Western Australia, and having asked the question a dozen or more times without results, I am convinced that the only way to find out is to go and measure it. Even in a British Admiralty chart, that Bible of those who go down to the sea in ships, I found no real answer, but a warning which struck me as significant: “Masters of vessels should be careful when navigating the northwest coast, because it has not as yet been fully surveyed or charted.”

It struck me that there must be a wonderful country behind this uncharted coast. I learned that those venturesome explorers who have traversed the northwest have brought back reports that point to it as promising some day to be one

of the most valuable assets of the state; that day, however, is still distant, because only when people settle there in large numbers can it become really productive.

Not even along the western coast, before you round Northwest Cape and pass thru the Dampier Islands to the true northwest coast, has the settler made any real stand. Yet that land is rich in agricultural possibilities, provided common sense and a knowledge of the soil and moisture is used in tilling it. Common sense, for instance, such as was employed by one farmer living near Carnarvon, not far from where the Gascoyne River empties into Sharks Bay. The Gascoyne is a surprising river. The first white man who visited it reported that its bed was dry and sandy. Then some one discovered that while its bed might be dry, beneath it the river was flowing merrily along, and that for a hundred miles back from the mouth this was



This is a view of Perth, capital of Western Australia. It is a comparatively new city because it is only in the last twenty years—since the great gold fields were discovered—that it has been built on modern lines. Including suburbs, it has a population of 110,000. The photograph shows the railway station, terminal for the east and west lines which link all of the capitals of Australian states.



A street scene in Perth. Looking east in St. George's Terrace.

true. So this intelligent farmer bored into the ground a bare twenty-four feet and struck water—great quantities of it. He sank a number of wells and today gasoline engines and windmills are pouring upon his acres a crop-producing flood. He also found that a half ton of lime and 200 pounds of superphosphate to the acre put his land into first-class bearing condition. His farm now produces alfalfa that yields six cuttings a year. .

Others have followed his example, yet there still is a wide expanse of territory between the Murchison and Ord Rivers and in the Kimberley mine district, more than a thousand miles long and extending more than two hundred miles back from the coast, where there are less than 7,000 white people. There are more than twenty rivers in this district and they drain a country rich in the productive red soil typical of nearly all Australia.

The northwest has a regular rainy season and regular rainfall, and already it has been demonstrated that the land will raise almost anything that is planted, and that sheep and



The Government House and gardens at Perth.

long-horned cattle, the latter now being the principal export, do well there.

To my mind there is no more romantic spot in Australia than Ninety Mile Beach, on the northwest coast, where the great part of the world's supply of pearl shell is gathered. Broome is the port. Its small population is more suggestive of Asia than of a European nation. It is in reality a double town. One section is white and has at best fewer than a hundred people, the other section is a bit of transplanted Japan. There I found everything typically Japanese; they even send to their native land for the clothing which they wear.

The white men who live there usually act as checkers on



Down in the southeast corner of Western Australia, on the Great Australian Bight, is located a city of about 15,000 population called Albany. It is the summer resort of the goldfields and the center of an agricultural district which is steadily growing in importance. The coastal lands near Albany have an annual rainfall of from 30 to 50 inches. It boasts a splendid harbor, the beauties of which offset the dullness of the town.

the divers. They do not make good divers themselves, for they get aches and pains from working under the water, especially at the depth where the best shell is found. That is why most of the divers are Filipinos, Malays and Japanese. In the past these divers were recruited under a three-year contract around Singapore. They were paid seven dollars a month, with a bonus on every ton of shell they brought up. A good diver could make from seven hundred and fifty to a thousand dollars a year at that rate, working in water under twenty-three fathoms in depth. Thirty-five years ago, when naked blacks were the only divers there, they used to work in deeper water, but the death rate among those who went down was so high that today the divers stick closer in shore, altho much shell is to be found farther out. New methods will have to be adopted, however, before the greater depths can be profitably worked.

At that, the pearl industry is worth close to two million dollars a year to the Commonwealth. Around Broome it is customary to let the off-color races have pretty free sway;



Most of our pearls come from Ninety Mile Beach, on the northwest coast of Australia. Pearl shell is gathered by divers operating from small crafts known as luggers. These boats are of about fifteen tons burden and are manned by seven men, one of whom is a white man, who opens the shells and searches for the pearls. The latest figures show no fewer than 240 luggers engaged in this industry off northwest Australia, and about 3,000 divers, most Asiatics. The photograph shows one of the lugger fleets.

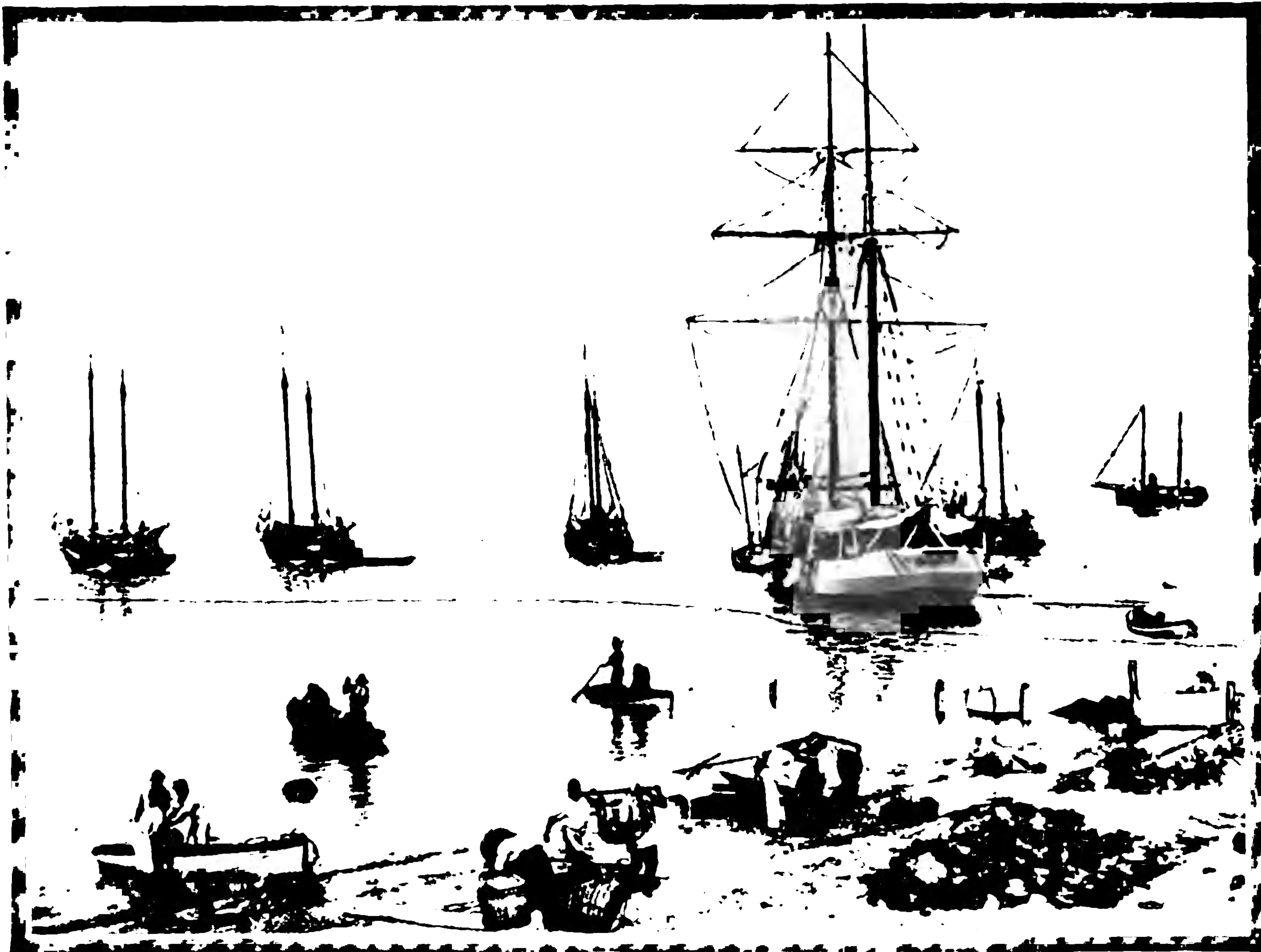
that is why, I imagine, there are so often race riots in this territory.

The pearling industry has one natural enemy—the “willy-willies” or tropical hurricanes, which at certain seasons of the year wreak great havoc among the fishing fleets. In one memorable storm a few years ago thirty luggers went down with all hands.

East of Western Australia and between it and the state of Queensland lies the Northern Territory, once a part of New

South Wales, later annexed to the state of South Australia. It is a vast tract, 523,620 square miles, yet with a white population of only 2,500. It lies between 11 and 26 degrees south of the equator, and not much more of it is known today than in 1870, when South Australia built a telegraph line thru it from Adelaide to Port Darwin, the capital of the territory and the only town of any size. In fact, the telegraph is the chief reason for the existence of Port Darwin.

As far back as 1825 the British government established a military post on Melville Island, fifteen miles north of where Darwin now stands, but the blackfellows proved so troublesome that the post was moved to the mainland. At that time, and until 1863, New South Wales held title to the territory. After that South Australia governed it, until 1900, when the



Unloading pearl shell on the beach at Broome.

Commonwealth was formed, South Australia gave up possession on condition that the federal government take over the debt it had incurred on behalf of the territory. It also gave up the territory's one north and south railroad on condition that the line be extended to Port Darwin. This has never been done, but talk of building it is being revived now.

In the days when each state made its own laws and had no ties with other colonies, South Australia passed a law permitting the importation of black and yellow labor into the territory because it was found impossible to get white men in any numbers to work in the tropics. Several hundred Chinese thus came in, as well as many other colored laborers, but the "White Australia" policy has stopped that, and little further



An orange grove near York.

development of the Northern Territory's resources has been made. It remains a vast, unknown, uncharted region with great tracts of virgin land never explored. Within its three straight sides—1,970 miles long—are forests, hills and plains which are eminently suited to pastoral purposes. So far, that is the only real industry that has been developed, but the freezing works at Port Darwin are no doubt the forerunners of many more to come.

One straggling railroad line it had, I found, running 145 miles between Port Darwin and Pine Creek, where once it was believed that there was great mineral wealth to be found. A little locomotive with two cars wheezes over the rusty rails twice a week.

Port Darwin itself is a typically sleepy, tropic town. In the Asiatic quarter there are 600 people, with about an equal number in the European section, a hundred of whom are women. For 1,500 miles on either side of Port Darwin there is not so much as a village. Its only callers by sea are a few trading vessels and pearling luggers from Torres Straits.

It is likely that for many years to come the Northern Territory will remain a pastoral country, with great possibilities which cannot be realized until other states have had their chance at the settler first. The land is suitable for anything that the land of the tropical part of Queensland, its neighbor on the east, is good for: all the fruits and vegetables of the tropics, rice and sugar cane, rubber, cotton and tobacco.



Lumbering is an important industry in every Australian state and these are typical scenes in the lumbering districts. Above, oxen are being used to skid the huge logs out of the woods. Below, is shown a sawmill camp in the big timber.



CHAPTER X

NEW SOUTH WALES

NEW SOUTH WALES is the mother state of Australia. It has a population of 2,000,000, forty per cent of the entire population of the Commonwealth, and an area of 310,372 square miles—larger than our own State of Texas by one-

sixth with a population only one-half as great as the Lone Star State. It is about one-tenth of the whole area of Australia, but it is not as thickly settled as the state of Victoria. There are only 98 men to each 100 women, and at least sixty per cent of the people live in the cities.

The cutting loose of the American colonies from Great Britain played a big part in the history of New South Wales, for England's jails were overflowing with criminal or political prisoners who otherwise would have been transported to America. So in 1788 a fleet of vessels landed 1,035 convicts at what is now the city of Sydney, and there they

formed the nucleus of the first penal colony in Australia.

In traveling thru the state I found that the country is divided into three sections. The Eastern division lies between



Martin Place, Sydney, might well be called the Wall Street of the city, as it is lined with banks. The fifteen banks chartered by the state are capitalized for a hundred million dollars. The state government has a savings bank with 136 branches and 500 agencies, and it has deposits averaging \$120 for each person in the state. In the picture the clock tower marks the main postoffice building.

its rather forbidding rocky coast and the mountains. The Central division takes in the plateaus of the mountains. The third, the Western division, embraces the plains country, which has an average rainfall of less than ten inches a year. In this section lies the Darling River, which joins the Murray on the Victorian state boundary and is a part of the continent's only important river system. Between them the two rivers drain five-sixths of New South Wales and almost one-seventh of Australia, yet the Darling, running directly across the state from north to south, dwindles in dry seasons to a mere rivulet, and once was practically dried up for a period of eleven months.

Its peculiar land formations give New South Wales a diversified climate and even more diversified products. The rainfall ranges from over seventy inches a year in some localities to less than ten inches in others. In the northern and western parts extreme heat is not unusual during the Australian summer, while in the southern part there is a chain of mountains where during their winter—June, July and August—the people are sometimes snowbound.

From a dry scientific report I culled the rather startling information that Mt. Kosciusko, 7,328 feet above sea level, the highest point in Australia and the place from which spring the headwaters of the Murray, is the oldest mountain in the world; that long before other mountains had been formed by upheavals of the earth, Kosciusko reared its lonely head to a height twice that of today. It is hard to surpass Mt. Kosciusko for grandeur and beauty, and the government of New South Wales has set it aside as a playground, where may be enjoyed such winter sports as skating and skiing, denied to most Australians.

New South Wales produces all the fruits of cold, temperate and tropical lands. Its soil raises wheat, barley, corn, oats, potatoes, sugarcane and vegetables in abundance. Its mountain tablelands and slopes are covered with rich pastures upon which dairying, and sheep-raising for both meat and wool are profitable ventures. Its forests yield valuable hardwoods.

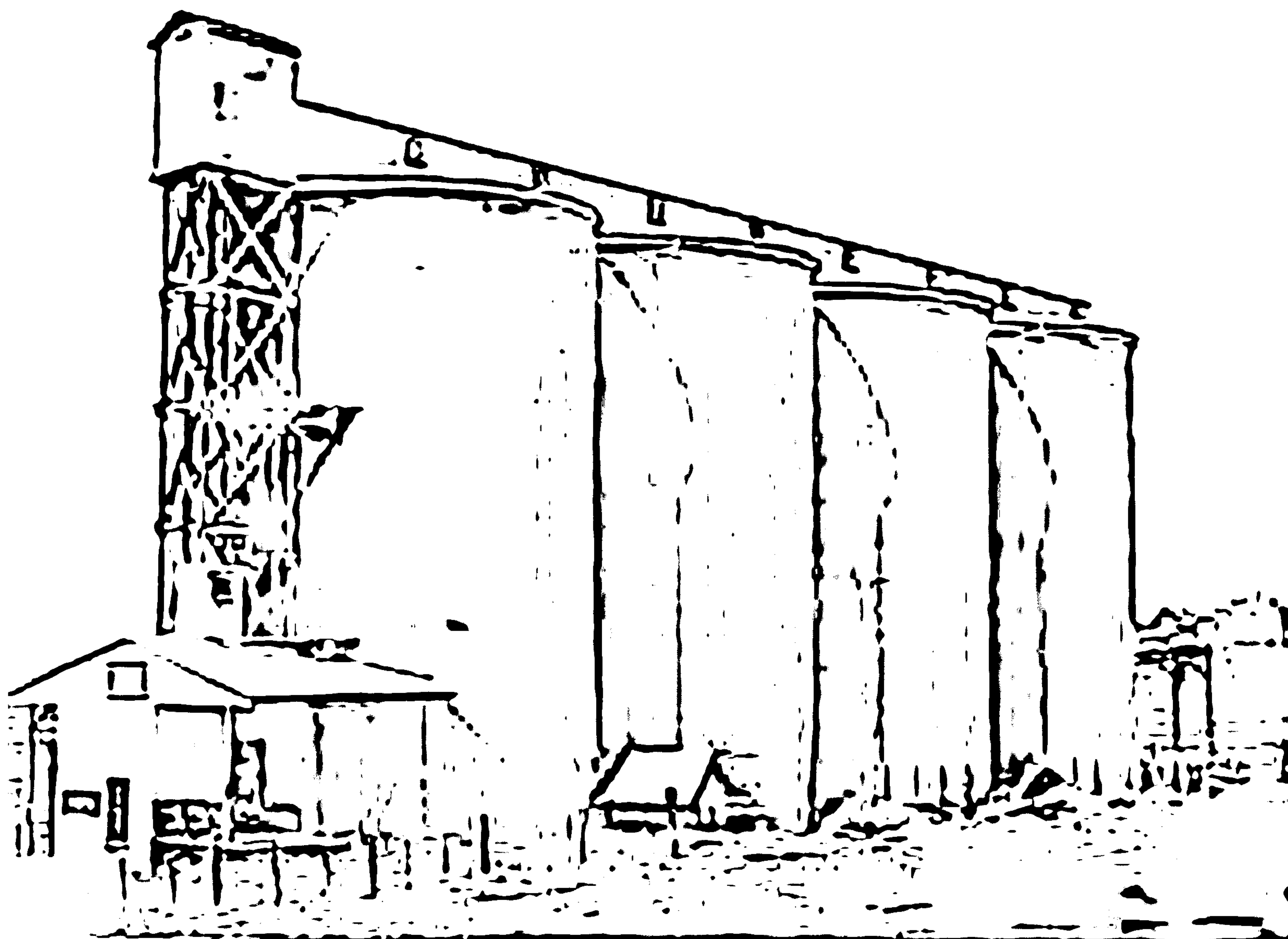


This picture was taken near the source of the Murray River between New South Wales and Victoria. The snow-capped mountain in the distance is Mt. Kosciusko, the highest mountain in Australia.

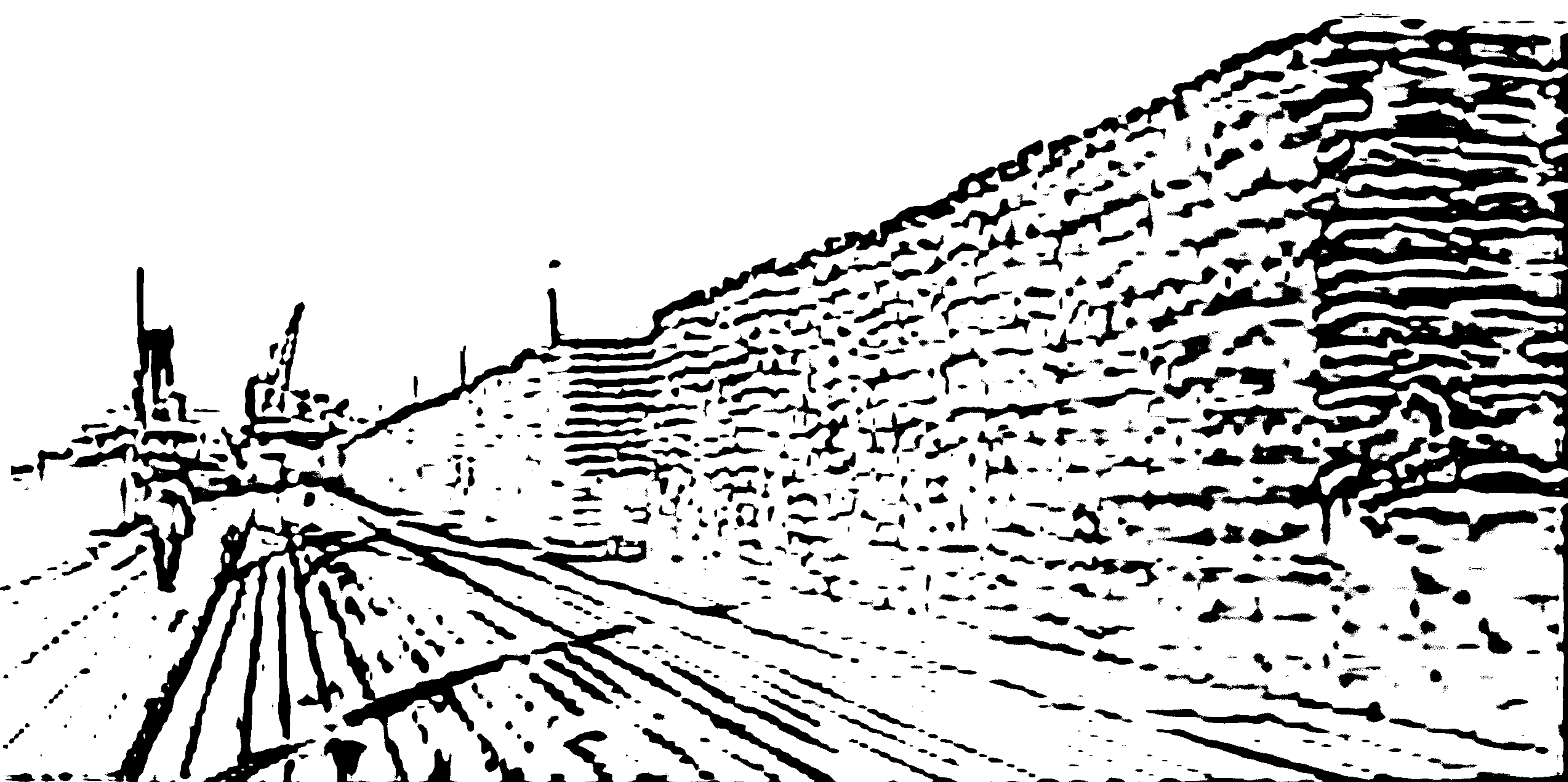
My investigations show that 50,000,000 out of the 200,000,000 acres in the state would be productive under cultivation, the balance for grazing. At present about one-tenth of this available land is being cropped, two-thirds to three-fourths of the acreage in crops being devoted to wheat. This state, I found, was the first to adopt the American method of handling wheat in bulk, and all along the railroad lines elevators are being built.

But its pastoral industries are the real source of the wealth of New South Wales, and sheep are the backbone of the industry. In fact, this state is the wool-growing center of the world and the leader in the production of merino wool. The annual clip represents some 300,000,000 pounds, ninety per cent of it being merino wool.

We left Sydney by train one evening and by breakfast the next morning we had crossed the mountain range and



The type of modern wheat elevator now being built in New South Wales.



The older method of storing wheat, and the one most frequently used, is shown in this picture. This dock is piled high with sacked wheat, awaiting shipment.

were in the sheep country. We were then only 400 feet above sea level. Acres upon acres of porous red soil, of sandy plains, stunted trees and a bewildering assortment of herbage varying from six inches to head-high—these are what one encounters in the bush country of Australia. I covered mile after mile without a sight of water except where here and there the rainfall had been drained into ponds, called tanks, scooped out of the low places. This is the general condition in the greatest sheep-raising country in the world.

My impression of the country was that it was dry and desolate. But on a visit to Milroy Station, a ranch of 300,000 acres five hundred miles from the coast of New South Wales and eighty miles south of the border of the state of Queensland, I learned that with only an average rainfall of eleven



Mr. Boyce, snapped on an inspection trip on one of the sheep stations in New South Wales. Mr. Boyce and his party covered more than sixty miles in the station conveyance, which most of the time was drawn by four horses, as the way lay thru deep sand, heavy herbage or over land that was being cleared.



The salt bush grows profusely in the dry belt of New South Wales and is one of the staple herbs upon which the merino sheep feed. It varies in height from a few inches to the height of a man. It is both food and water for the sheep and contains just enough salt to keep them in condition.

age one to three feet in height, one variety, called "old man salt bush," growing as high as a man's head. The taste is not unpleasant, being but slightly salty. Given a field in the winter of salt bush in which pig weed grows, sheep require no other food nor water. Upon being crushed between the fingers the leaf of the pig weed becomes a moist pulp which contains both food and drink. This plant grows to the height of two feet, being very bushy. The natives sometimes, when

inches a year this land is ideal for sheep. There is food value in almost all the herbs and trees. Nature kindly provides needed moisture for the sheep in many nutritious weeds which they eat. Only in those years when no rain falls at all does the sheepman worry and ship his flocks away to places where there is food and water. At other times he has few cares, for his stock will wax fat and grow a heavy fleece and multiply with little effort on his part.

Salt bush is one of the mainstays of the sheepmen. This grows in profusion in all soils. It is a bush weed whose branches are thick with heavy dark green leaves one to two inches long and three-quarters of an inch wide. It will aver-



This champion Jersey bull, exhibited at the Royal Agricultural Show in Sydney and winning over all competitors, suggests the kind of cattle raised in New South Wales.

food is scarce, cook it as we prepare spinach, and it is life-sustaining. Tar vine, another herb, trails on the ground and is plentiful and nutritious.

Timothy, a species of native clover, and a hardy, low-growing weed called "never fail," which thrives in even the



Judging Friesian cattle in the Royal Agricultural Show in Sydney.

driest times, are other foods, but the herbage is preferred by the sheep.

The sheepman who looks ahead runs a mower over the fields which are not needed for grazing purposes, cuts all the herbage and rakes it up for ensilage. The manner of preserving it is peculiarly Australian. It is packed away in pits dug out of the earth. Salt is mixed in—about forty pounds of coarse salt rock to a ton of ensilage—to keep it from fermenting. The whole mass is covered with dirt to make it air-tight, and it will keep for years.

At Milroy Station I was shown a mound of earth 33 yards long, 18 feet wide and 12 feet deep which contained ninety



Hereford cattle are popular in New South Wales. This prize Hereford bull from the Royal Agricultural Show in Sydney would attract attention in any similar exposition the world over.

tons of ensilage. This would feed 10,000 sheep for six weeks.

Many times, when food is short, stunted trees are used for food for the "woolies." Among them are lignum bush, the supplejack, the whitewood, the wilga, the rosewood and dogwood. The sheep eagerly eat the leaves which are blown down by the wind, but quite often, particularly in years of drought, the sheepman prunes the trees and turns the sheep in on the branches. So long as one live branch is left the tree will not die and its branches will be replaced inside a twelvemonth.

As a last extremity the sheep will eat thistles, but only after they have devoured every other plant. It requires about six acres of average brush land to feed a sheep, but I was told at Milroy that in years of average rainfall 80,000 sheep have fed well on the ratio of four acres to a sheep.

Water is of course the problem for which provision must be made. This is done by picking a low place between ridges, banking up its sides and digging out the middle and diverting to it, by means of shallow ditches, all the water which would not naturally drain itself into the ponds, or "tanks," as the Australians call them.

Flies, crows, hawks and foxes—and of course the rabbit, which destroys the vegetation—are the enemies of the sheepman. The flies he combats by dipping his sheep, the meat-eating enemies by placing poisoned bait for them. The rabbits are destroyed in a similar manner.

The newcomer to Australia probably will be puzzled by references to cattle or sheep "stations." The American would say "ranch." Few owners live on their stations, for most of them are owned by syndicates with numerous stockholders. Usually there is a manager, who has learned the business, starting as a "jackaroo" or ranch hand. The station houses which I saw were large, roomy affairs built of wood with corrugated iron roofs, wide, shady verandas, set among trees and flowers. I found Milroy very comfortable during my stay.

The barracks, or men's sleeping quarters, all appear to be built on the same plan. There is a porch along the entire front



High rent doesn't bother the average miner in New South Wales, for he appears satisfied with any old house for his family. This shanty of bark walls and roof was photographed in the southwestern part of the state, where the rainfall is light and the weather in winter does not get so cold that real protection from the elements is needed.

and opening off that are well furnished bedrooms for the hands. Bathrooms with both shower and tubs are the common thing. All the buildings are whitewashed. During hot weather sleeping porches, or pavilions, tightly screened against mosquitoes, are used. Most of the sheep country is still held in large tracts, far from towns and railroads, but at Milroy, which is typical, I found not only comforts, but luxury. There were telephones, gas lights from a carbide plant, shower baths, and

even a splendid tennis court. It is located forty miles from a railroad, but a motorcar does it in two hours, except in rainy weather, when it can't be done at all. You hear a great deal in the cities about the loneliness of life in the bush, but I have yet to find a bush-dweller who will admit it.

The owner of the Milroy Station lived in Sydney. The local manager had been advised that an American newspaper man, with his son and secretary, would arrive on a certain date and to take care of them and see to their comfort. The manager evidently over-estimated the importance of the visitors and was worried about our visit. He had a five-year-old son who told us that they had hoped it would rain (the roads are impassable when it rains) so we could not get there. No evidence of this worry, however, showed itself in the hospitable treatment we received.

The production of the mines of New South Wales has for seven years averaged \$50,000,000 annually. Other than coal, the chief mines are the silver-lead mines in the Barrier mountain ranges, most of which are owned by the Broken Hill



The settlers on the frontiers of civilization in New South Wales have a fairly substantial type of house, as this picture shows. The corrugated iron water tank always is conspicuous.

Mining Company. Millions in silver ore have been taken out of the workings, which are world famous, in part because of the romance of its finding.

On the top of the broken ridge or crest from which the mines are named and which long since have disappeared, huge boulders of manganic iron challenged the passerby with their shining surfaces, polished bright by the feet of thousands of kangaroos which made the range their home. For years a shepherd camped nightly over a bed of silver worth a king's ransom. Accidentally he found samples of lead ore which in the hands of an assayer revealed traces of silver.

But the range lay 200 miles from a railroad and 150 miles from a road of any kind, and there was no water supply. The men who staked it out, poor men unable to work it themselves, were turned down in their efforts to dispose of their holdings for \$1,500. Somehow they stuck it out, put down a couple of shafts and ran crosscuts without making a find that attracted any attention. But they were hopeful and managed to sell a few shares of stock, and so continued the development until one day they ran across the real lode, fabulously rich. Within a few months a sixteenth share, that could have been bought for \$3,000, was quoted at \$7,000,000.

Before the war the Broken Hill mines produced a quarter of the world's lead and a sixteenth of the world's silver in one year. Broken Hill has done more, however. It has developed new processes and treatments for ores and has been the training ground for world-famous mining engineers and metallurgists. We Americans may take a small share of the Australian pride in the Broken Hill mines, because it was American mining experts who first developed them after the lode was found.

I felt quite at home in Sydney, the capital and the largest city as well as the most important in the Commonwealth. It is the most nearly American city I was in. It is about the size of Boston or St. Louis, with a population of 800,000. Our first glimpse of the city was from the deck of a steamer as it passed thru the heads which guard the entrance to Port Jackson, and I can well imagine the satisfaction of Captain Cook, when, in

1770, the magnificence and beauty of the harbor burst upon him. Man has modernized both sides of this wonderful port and its scores of bays, coves and inlets, but he has not spoiled its attractiveness.

Numerous islets, marked by lighthouses or signal stations, dot the waters outside the channel from the heads to the wharfs, a distance of six or seven miles. One of these, Fort Denison, is the site of an obsolete fort which was built in a panic in 1839 when the authorities of the then convict colony awoke one morning to find that two American men-of-war had successfully passed the heads of the port in the night and were placidly anchored in the stream. The islet was cut down to a flat about twenty feet above water and guns were mounted to command the channel. A caretaker still maintains lonely vigil over the ancient cannon and the ruins of four solitary stone cells which were used in early days for stubborn prisoners.

As we came up the harbor we found everywhere movement and life. Up-to-date ferry boats were scurrying back and forth between the city and its beautiful suburbs. Sailing ships



The entrance to Sydney harbor.



This is the picturesque old fort and prison which stands in Sydney harbor, a reminder of the early days of the city.

and steamers of all sizes and descriptions and from many ports were anchored in the stream or tied up at the wharfs. Sydney is a port of call for over 7,500 vessels of all descriptions each year, making it one of the chief ports of the world.

A skyline of buildings, eight, nine or ten stories high, rising from the grounds surrounding the bay, greets the eye. Later, from a hotel room high above the street, I was to discover that Sydney is a city of corrugated iron roofs, the monotony being broken by more modern roofs of slate or tile on the recently put up structures.

Circular Quay, at which the ferries converge, is the principal artery of the city's life. It is there that the thousands who work in the city, but live in the suburbs, come and go; to it lead the main streets of the downtown business section.

I know some American city planners who would throw up their hands in despair over Sydney. No engineer with transit and level laid out her streets, and no far-seeing authorities mapped her site with any regard for posterity. The trails of the bullock teams of convict days gradually became roads and these roads became streets, so narrow that today they permit only one-way traffic in the downtown sections.

Close to Circular Quay is the stately government house in

which resides the governor appointed by the British crown.

The entrance to the palace is on Macquarie Street, named in honor of the wise and benevolent old governor of convict days who used the labor of his prisoners to construct the parliament and other buildings along the street; they are still in use. The street is wide and abuts on parks and parkways; it is one of the few wide thorofares made so without the expenditure of large sums in buying up adjoining property and razing buildings.

King Street and Pitt also start at Circular Quay and extend across the entire downtown business section. They are lined with office buildings and stores that compare favorably with our large city shops.

I was studying a map of Sydney streets in order to find a small cross street where a friend had an office, and the diagram reminded me of nothing so much as one of those mystic maze puzzles which are published occasionally with prizes for those who can start from a given point and trace their way to another point. In Sydney the short streets come into the



The Circular Quay at Sydney.

long ones at all sorts of angles and change names without warning at the slightest of turns.

The history of public transportation service in Sydney struck me as highly amusing. The first street cars were horse-drawn affairs, instituted in 1862. Four years later the rails were pulled up because it was an infringement on the rights of the people to have to turn out of the road for a street car. In 1879 an exhibition was being held and the promoters, by a ruse, laid a line to the fair grounds. They announced that the tracks were to be temporary, that the cars were merely to help those who did not own horses to get to the fair. Old



Macquarie Street, Sydney.

files of the newspapers I dug up reveal efforts to get the rails torn up again that were worthy of a better object, but the tracks stayed and became the nucleus of the present electric system of 115 miles, over which 950,000 passengers are carried daily. Electricity did not come, however, until after cars pulled by tiny steam engines had been replaced by cable cars.

In Taronga Park, across the bay from Sydney, is one of the best "zoos" in the world. It is modeled after the famous zoo of Hagenbeck in Berlin, Germany, for as far as possible cages and bars have been done away with and the sixty acres of land upon which the zoo is built has been divided into spaces in which the wild animals are kept under conditions as near as possible like their native haunts.

Botanical Gardens is another beauty spot of the city. Originally it was the site upon which the convicts of other days raised the vegetables to feed themselves. Even then the au-

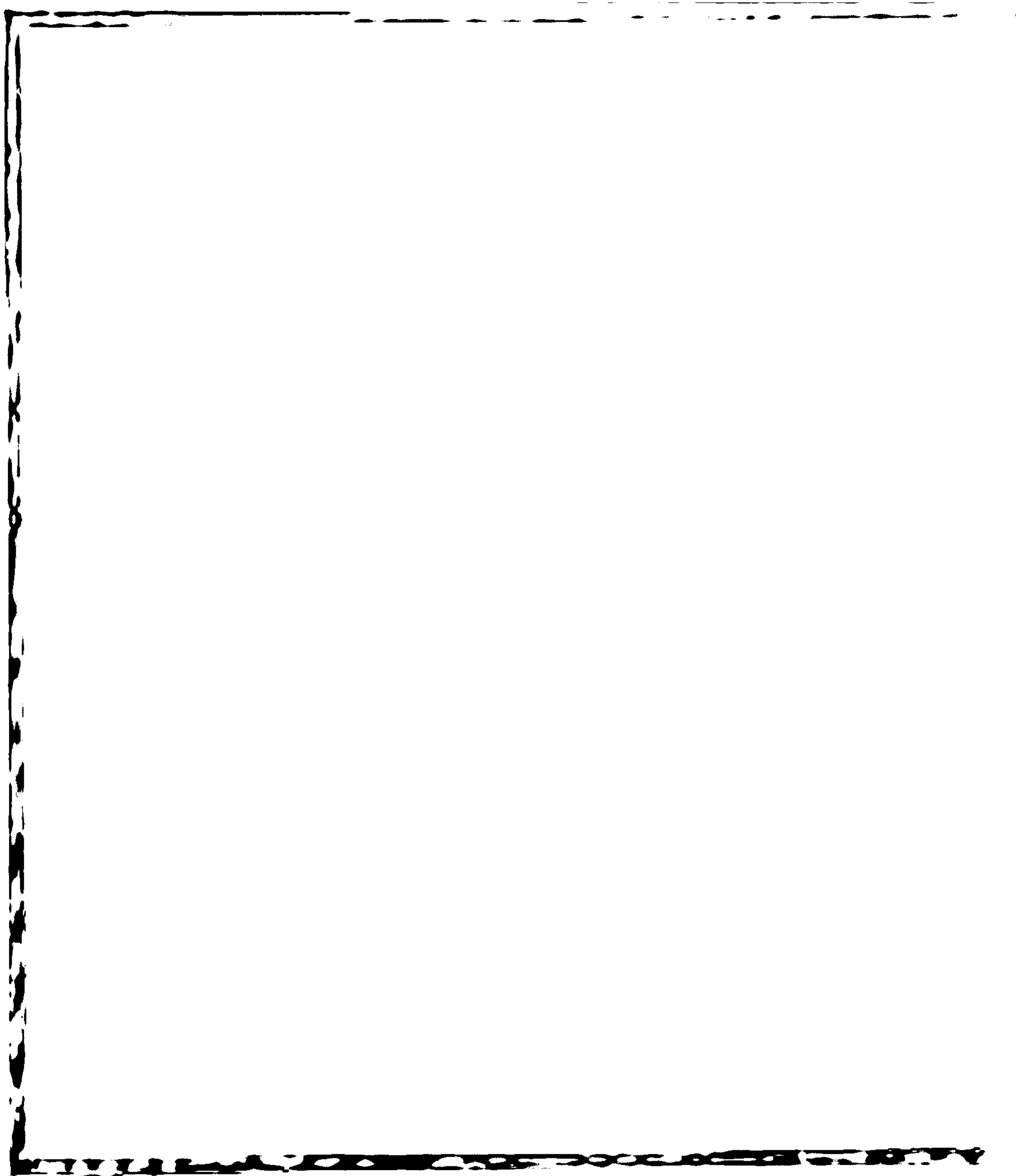
thorities realized that the people of the future would need breathing spaces and so set aside the garden for park purposes.

The people of Sydney probably make up the most cosmopolitan population in Australia. Races which now are prevented from coming into the country as a result of the "White Australia" policy, rub elbows on the street with people from all the white countries of the globe. Sydney has its Chinatown, too, where these unwanted people of the yellow race live by themselves. You

see an occasional Chinaman uptown or driving his vegetable wagon down the street, but he passes on about his business quietly and quickly. Black faces are a rarity. A few of the blackfellows, an occasional British subject from one of the island possessions, may pass you on the street, but mostly you see white people.

Sydney is racing mad. Every day there is horse racing somewhere near the city at one of the numerous tracks. The ponies

are always a subject of conversation. Certainly no country in the world caters more to its racing public than Australia.



Victoria Market, an imposing structure in George Street, the principal thoroughfare of Sydney, was intended to be a central market, but proved a white elephant. At enormous cost it has been converted into an office building with shops on the ground floor. In this way the state hopes to get back some of the money invested in the building.

At Randwick race course crowds of 100,000 are often handled on days when noted races are run.

Near Randwick are the great municipal playing fields, where in season cricket and football attract enormous crowds. Tennis, too, is a popular sport, as was shown by the attendance at the matches in which the American tennis stars participated this year. To know how to swim is almost a fetish with the Australians, and nowhere in the Commonwealth are there more devotees than in Sydney, where swimming, riding the breakers and diving are possible the greater part of the year.

Boxing is another sport which has a hold on Sydneyites. In years gone by Australia produced some of the world's greatest fighters, and today the squared ring is still popular.

Sydney night life is the most colorful, the most vivid, of all the Commonwealth. Its streets are thronged till midnight, and not even the turning out of the shop window lights at ten o'clock serves to send the crowds home. Theaters, cafes, beaches, and amusement resorts of every description lure the Sydneyite as a candle does the moth. After midnight the street cars run hourly only, and the last regular cars to the suburbs, the last boats across the bay, carry thousands.

Somewhere I heard some one refer to Sydney as the "city of sun and sin." It is not to be denied that it is fast, that its downtown streets are the haunts of painted women, that drinking to excess is carried on there more than in any other Australian city, but it is hard to find any city similarly situated and of the same size that is otherwise.

I like Sydney. Its people are genial and hospitable. They step along with more of a hustle than elsewhere in Australasia, but they are not too busy to be courteous and to make a stranger feel that he is welcome and that if he but meets them half way he will find them after all very much like himself.

In 1797 several British convicts who had been deported to Australia from England escaped from the penal settlement near what is now the city of Sydney and fled north along the coast. In pursuit of them went Lieutenant John Shortland

and a detachment of soldiers in a small boat. A hundred miles north Shortland believed that he was ahead of the fugitives and turned his boat toward the shore with the intention of landing and heading off the convicts. To his surprise what appeared to be a solid cliff proved to be the entrance of a beautiful harbor, and, guiding his boat over the bar at the mouth, he anchored and went ashore. On the beach he and his men found a large number of black nuggets which they recognized as coal, and investigation convinced Shortland that he had stumbled upon a rich deposit.

Later his superiors investigated his report concerning Port



The sailing ship has not vanished from the sea, as this picture taken at Newcastle shows. These ships bring lumber from New Zealand to Australia and carry back coal. Most of the ships in this picture are American craft.



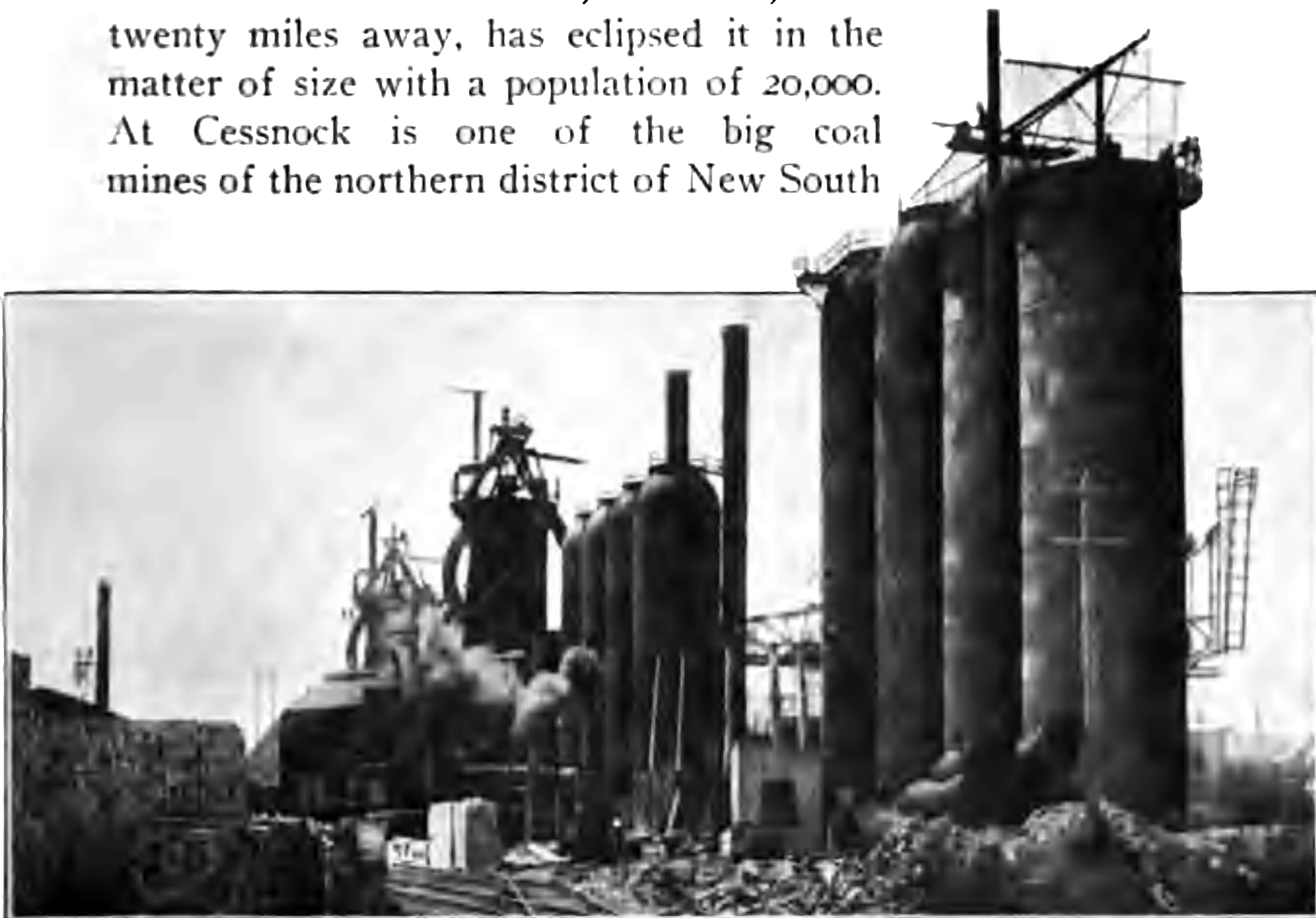
An interior view of one of the mills of the Broken Hill Proprietary Company's steel works in Newcastle.

Hunter, as he named his discovery, and found that he had surmised correctly and that there was a rich coal field almost at the very surface of the ground. This was the beginning of Newcastle, third largest port of Australia, and, in the matter of tonnage cleared, seventh among all the ports of the British Empire. During 1920 ships to the number of 1,625 visited Newcastle. Before the European war the average was 5,000 ships a year. The tonnage cleared was a great deal more and reached a climax in 1913. Since that year there has been a decline, which appears to have been checked.

There is one thing which always has held Newcastle back—the depth of its harbor, which is only twenty-three feet at its entrance. At least thirty feet are required by the larger ocean-going vessels of today, and it is planned to dredge to that depth as soon as the state government will appropriate the money. In spite of the handicap of shallow water Newcastle leads all the ports of the Commonwealth in the shipping of coal, and last year more than four and one-quarter million tons,

valued at fifteen million dollars, were sent out by ships from Port Hunter; for the state of New South Wales, in which Newcastle is located, has the most important coal fields of Australia, and the Newcastle, or northern district, has been worked the most. The New South Wales coal district is 200 miles across at its widest point. At three different spots the seams appear on the surface. Around Newcastle the seam is thirty feet thick, which is worked at a depth of between two and three hundred feet.

Its immense coal business and the fact that it is the location of Australia's greatest steel works and allied industries, has earned for Newcastle the nickname of "Pittsburgh of Australia." But if you should go to Newcastle with the expectation of seeing a city like Pittsburgh you would be keenly disappointed. For Newcastle has a population of only 16,000, and at least one of its suburbs, Cessnock, some twenty miles away, has eclipsed it in the matter of size with a population of 20,000. At Cessnock is one of the big coal mines of the northern district of New South



One of the modern blast furnaces in the Broken Hill Company's steel works in Newcastle.

Wales. However, Newcastle is the center of that district and its port, and with the suburbs caters to the need of 80,000 persons.

Alighting from a train at Newcastle, I was surprised to find so important a place so dingy and dreary. Its railway station is a small two-story brick structure, flanked by wooden sheds. The brick structure is used for baggage and the sheds for passengers. The street upon which it faces is scarcely paved at all. Across from the station are a block of low buildings, houses, shops of various kinds and a hotel or two. Down the center of the street runs the street railway operated by the New South Wales government. This railway service is a tender spot in Newcastle. Antiquated steam engines from the stacks of which dense black clouds of smoke pour, thump and bump along, dragging behind them passenger coaches in which the residents declare it is a torture to ride. Altho the Newcastle lines carry fifteen million passengers a year, no one rides on them who is not compelled to do so. On the other hand, motor busses do a thriving business.

On the main street, a block away, you will begin to realize that Newcastle must do a tremendous amount of business. You find one bank after another, and where there are many banks there is much business. A check of the principal industries located in or near the city reveals plants that manufacture axles, wheels and springs for railways, galvanized iron, nails, tinplate, silica brick, glass bottles, boilers and big sulphide works. The steel works are the biggest thing. As is always the case, coal brings industry. It was this fact that brought to Newcastle the steel works of the Broken Hill Proprietary Company and gave birth to one of the Commonwealth's industrial romances of the great war.

The Broken Hill Company, it might be mentioned, operates one of the world's greatest silver mines, located in New South Wales, almost on the border line of South Australia. Twenty years ago, purely as the basis for possible use, it obtained control of two mountains, Iron Knob and Iron Monarch, in South Australia, which proved to be exceedingly rich in iron



The iron ore which is making New South Wales the steel state of Australia is mined in the state but is sent by rail to a port in South Australia and thence by ship around the south coast and up the east coast to Newcastle, where the steel mills are located near the coal supply. This is cheaper than shipping the coal to where the ore is found. The picture shows ore being loaded by means of a conveyor belt.

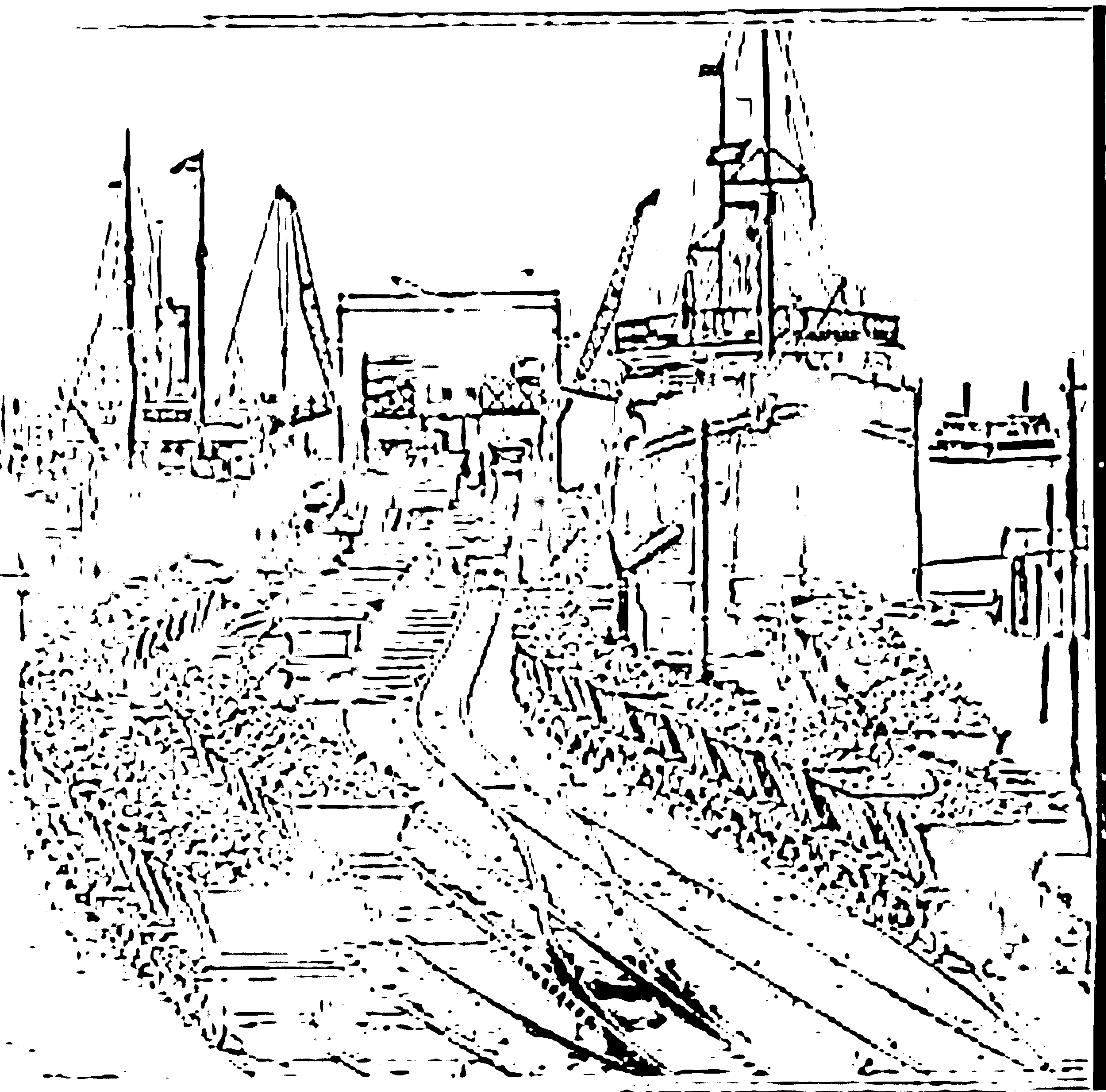
ore. But it was not until 1913 that the company decided to take up iron mining as a sideline to its silver mining.

Then it began to look around for a suitable location for its steel works. Newcastle coal was the deciding factor. It was splendid for making coke and Port Hunter offered a good harbor into which to bring the iron ore. As it takes more coal than it does ore in the making of steel, it was cheaper to haul the ore to the coal than to haul the coal to the ore. The only bad feature was the absence of solid land on which to build docks. Twenty thousand piles, driven eighteen to thirty-five feet into the mud, was the solution. Over the pilings was put sand dredged from the river bottom until what had been a low-lying mangrove swamp only two feet above flood level became solid ground twelve feet above tidewater.

Since the close of the war, the plant, which employs 6,000

men, has been doubled, with the idea of making all the steel which Australia and New Zealand can use. If there is any left over a bid for foreign trade will be made. Just now the lack of a tariff which will prevent the United States and Japan from competing with Newcastle steel, is the one thing which stands in the way.

With both coal and steel available other industries which



The railroads between Newcastle, the coal center of New South Wales, and Sydney, a hundred miles away, reveal a procession of coal trains bound for the Sydney wharfs, where the big passenger and cargo ships load for the return trips to America and Europe. The tracks run alongside the ships and loading is done by powerful machinery.

use both are locating at Newcastle. So far as I could see there was not a foot of suitable land between Newcastle and Port Waratah which has not already been snapped up for future industries dependent on steel. So Newcastle, already the only coal port of any importance south of the equator, may become the greatest steel port as well—the “Pittsburgh of Australia.”

You will hear in Newcastle mutterings that the city is held back by the jealousy of Sydney. Sydney, they say in Newcastle, by means of its greater population, controls the state government and has for years blocked any legislation that would make Newcastle any greater as a port. Still this opposition, fancied or real, has done a great thing for Newcastle. It has welded its business interests into a Chamber of Commerce that is always fighting hard to keep the city progressing. It was largely thru this body that the government of the Commonwealth was induced to locate on Walsh Island, in the harbor of Port Hunter, a plant which builds steel ships for the Commonwealth's own line of government owned, but not operated, steamers. So far the ships turned out at the Walsh Island yard, which employs 2,500 men, have been of 5,500 tons, altho improvements now under way will permit of the building of ships of almost double that tonnage.

The Hunter River, which flows into the sea at Newcastle, runs thru a rich agricultural and dairying district, and both it and its navigable arms, the Paterson and Williams Rivers, bring down to Newcastle each year great quantities of farm and dairy produce, much of which is shipped abroad, altho coastal vessels carry some of it to neighboring cities. Newcastle, too, is a railroad center, as the lines center here which go to Brisbane, along the coast and across New South Wales



Opals, sapphires, rubies, diamonds, topazes and other stones of less value are found in Australia. The upper picture shows men working a sapphire shaft. The lower picture shows men washing gravel for sapphire and other precious stones.

CHAPTER XI

QUEENSLAND

WHILE I was in New Zealand a friend told me of a wonderful trip he had made by motor thru the Australian bush country of northwestern New South Wales and southwestern Queensland, and I decided to take a similar route. The

course was from Brewarrina, the railhead in New South Wales, to Cunnamulla, the railhead in the state of Queensland, a distance estimated to be two hundred miles. We made it by motor car.

The country thru which we passed would be called a "park" country in western United States. It comprises some open plains, a good deal of timber, mostly eucalyptus, and an undergrowth which the Australian calls bush.

The standard rate for motorcar hire in this country is 25 cents a mile each way. As there were three of us the rate was fair enough. But because it happened to be during the Easter holidays the price was advanced fifty per cent. The driver was not long out from England, but he



Altho Queensland is well supplied with small rivers and creeks, much of its land in the so-called "dry area" is watered by artesian wells.

claimed he knew the road—which he did not, as we soon learned. His car was an old second-hand one, with tires in bad shape and no “spare.” He took gas for one way only. With that equipment we started out on a 200-mile trip where there were but two ranch houses on the whole route.

The driver was lost before we were twenty-five miles from our starting place, but I knew that the general direction he was keeping was all right, because we were driving toward the sun, and the sun was north of us and Cunnamulla lay that way. Much of the time we were traveling thru bush country, where no track or trail was visible, but our greatest danger was that of becoming mired in the banks or bottoms of the small creeks we had to cross.

It began to grow dark before six o'clock, and we had still fifty miles to go. Fortunately, in one way, but unfortunately from the standpoint of comfort, from that point in to Cunnamulla there was a road. The unfortunate part of it lay in the fact that the road was deeply rutted, cut by the wheels of wool wagons drawn by thirty oxen and carrying loads of six to eight tons. The ruts were hard to negotiate in the dark, and all hands frequently had to clamber out and help the driver back the car out of sand or mire.

We had started with a leg of mutton, some corned beef, two loaves of bread and a full waterbag. We ate sparingly at lunch because we fully expected to fail to finish the trip that day, and we did not know when we might mire fast or have a breakdown and one of us would have to walk twenty-five or thirty miles for help. It was with great relief, therefore, that at ten o'clock we saw the lights of the village ahead. We pulled up at the hotel just as every one was going to bed—and just as the gasoline gave out. A little Greek restaurant supplied us with the best ham and eggs we ever ate—or at least so our hunger told us.

Our driver intended returning early the next morning, so I settled with him that night. The meter on the car registered 198 miles, but the driver claimed that the meter ran slow and that we had actually covered sixty miles more than was regis-



Queensland is second in importance as regards sheep among the states of the Commonwealth. In the western part of the state—the dry belt—the wool-producing merino is, of course, the principal breed, but in the regions near the coast the British breeds, such as the English Leicester, Border Leicester, Lincoln, Southdown, Dorset, Roscommon, Romney Marsh and Shropshire, as well as the New Zealand bred Corriedale and merino crossbreeds are raised for both mutton and wool. A hundred million pounds of wool are produced in the state annually, on the average.

tered. Altogether I paid him \$175, but it was worth it. In no other way could I have gained the personal information necessary to understand the merino wool sheep industry of Australia.

The sheep country is divided into great fields—paddocks they call them—from one to five miles wide and running to some point where there is water, either creek or tank. We took turns in opening gates from one paddock into the next; after the fiftieth gate I lost count. The last hundred miles of our trip lay in Queensland. We came into the state thru a gate in the 700-mile rabbit fence, six feet high, which separates the two states.

This fence is patrolled from one end to the other by outriders of each state, and is kept in constant repair. For years before I came to Australia I had heard more about the rabbits eating up the country than about anything else, but in this two hundred miles of sheep and cattle country I saw never a rabbit.



A typical scene in the cattle country of Queensland.

In fact, the wild animal life was confined to a few kangaroos and emus.

I found that the country on the New South Wales side of the fence is given over almost entirely to sheep, which was true also of the first fifty miles in Queensland, but after that we ran into country where there were both cattle and sheep, with cattle predominating. Queensland is the real cattle state of Australia. This is due largely to the fact that here is to be found a fine grass for grazing. Sheep do well on the herbage that is found in other states, but cattle will eat it only when there is nothing else. Also, with the exception of the southwestern part of the state, which lies in the dry belt of Australia, the average rainfall is plentiful, so that every variety of food and forage for man and beast is grown.

We had to lay over in Cunnamulla all the next day because it is the end of a branch line and trains run only twice a week. After learning that, I was rather surprised when I got to the station the next morning, for I found that the train had sleepers for the entire 600-mile run to Brisbane, the state capital, on the east coast, and that it was also carrying a dining car. Here

neat girls (not crap-shooting negroes as on American trains) served us breakfast, luncheon, dinner, and tea in the forenoon and tea in the afternoon. And at four-thirty the next morning the white sleeping car porter-conductor woke us to proffer morning tea and biscuits, altho shortly after seven o'clock we were due to breakfast at one of the thirty-two railroad lunch stands and dining rooms which the government maintains.

The dining car charges were most reasonable and the food good. I learned that the state-owned railroads of Queensland are operating at a loss, but at that there has been no lowering of the standard of service. Queensland has the greatest



Queensland carries approximately 6,000,000 head of cattle, or more than the aggregate herd of all the other states. In the beef strains Shorthorns predominate, with Herefords next in favor and then Aberdeen-Angus, Norfolks, Devons and Sussex. There are fourteen large meat works in the state. Their annual production is valued at \$40,000,000. The twenty-two cattle stations owned by the state government have herds totaling 200,000 head.

mileage of any state in the Commonwealth—5,640 miles.

Once when we stopped I was amused to see the chef climb out of the car and pluck two ripe watermelons from vines alongside the tracks, volunteer plants from seeds thrown there in days gone by by some passenger no doubt. It was a striking instance of the truth of the claim of Queenslanders that anything will grow in their state if it has water.

The first day of our way lay mostly thru bush country very similar to that we had traversed by motor car. But we saw many broad acres of thick-growing tall grass, both wild and sown, which is one reason why the state is able to feed some 6,000,000 cattle a year, practically double that of any other state. It comes a close second in sheep-raising, with 17,000,000 head. About dark of this first day we noticed much cactus and prickly pear and next morning revealed the same condition. No way of wiping out these pests has yet been found; they unfit the land for tillage, but do not prevent grazing of livestock.

The closer we got to the coast and the area of greater rainfall, the richer grew the land and the more it was cultivated. At that, of the 429,120,000 acres in the state less than 2,000,000 acres are being cultivated, while fully 300,000,000 are being used for grazing. From this it may readily be seen why Queensland has a population of only three-quarters of a million people. Most of the state lies within the true tropics—from 10 to 28 degrees south of the equator—and the white man never has succeeded in a laboring capacity in a climate less than 20 degrees from the equator. The "White Australia" policy prevents the bringing in of colored labor, the only kind that can make Queensland produce up to her natural capacity. For that reason she will remain for many years to come a cattle and sheep state, with fruit-raising and agriculture of secondary importance.

Most of the grazing land will carry one sheep to five acres under normal conditions, but near the coast, where tame grasses are grown and where the rainfall is abundant, there are places where for half of the year three sheep may be grazed upon one



They say "anything will grow in Queensland if you can give it water." Certainly, the rich soil of the northern part of the state has proved it can grow anything that grows in other lands within the tropics. Fruits native to other countries, transplanted to Australia, seem to grow larger and taste better. The picture shows a pineapple plantation in northern Queensland, the homestead set up on the highest point and the surrounding hillsides covered with pineapples. The Queensland pineapple is said by experts to surpass in taste that of Hawaii, where the whole crop is sold years before it is planted.

acre. In these same places cattle and horses are carried on an acre each, tho most of the state requires ten acres for each animal.

It is principally in the western portion that the merino sheep are raised, due to the fact that the merino requires less water than any other sheep; in fact the absence of much rain is given as the reason why Australia produces the finest merino wool in the world. In the coastal regions the British breeds and cross-bred sheep are more favored by the mixed farmers, who raise sheep for both mutton and wool.

At the hotel where we stopped in Brisbane we had daily reminders of the richness of Queensland soil in the shape of luscious fruits, as well as the beautiful flowers which adorned all the tables. I have seldom tasted more delicious fruit and

was interested to learn that bananas can be grown almost to the very border of New South Wales, 29 degrees south of the equator; I know of no other country where this is possible.

I learned that sugar-cane is responsible for nearly two-thirds of the agricultural wealth of Queensland, which grows the bulk of the cane needed to furnish the Commonwealth with part of its sugar. Of late the demand is getting ahead of the state's production, due to the ever-increasing fruit industry and the consequent growth of the canning and preserving of these fruits for export. Australia has been forced to go abroad for only a small amount so far, but the proportion is bound to increase, as the raising of cane is essentially a tropical industry and is more profitable when cheap colored labor can be used.

Queensland's forests are another source of wealth, but until



Fiji Islands formerly supplied Australia with bananas. Queensland now grows a supply that takes care of much of the demand. The quality equals that of the Fiji fruit.



Mineral wealth valued at \$20,000,000 is taken annually from the soil of the state of Queensland. Most famous of all Australian mines is the Mount Morgan, in northern Queensland, discovered in 1886, which has produced gold and copper worth \$125,000,000. The picture shows a part of the Mount Morgan property.

recently the state has followed in the footsteps of her sister states and has permitted indiscriminate destruction of valuable timber without any attempt at re-forestation, a mistake which she is trying now to rectify in the state reserves.

The state ranks fourth in the Commonwealth in the production of all minerals, but she leads in none. She is third in gold and second in copper, tin and coal. Most of her mineral wealth is due to the wonderful Mount Morgan gold and copper mines in the northeast section of the state, which were discovered in 1886 and have had an output since then valued at \$125,000,000.

I was glad afterwards that we had come into Queensland by the back door, as it were, to see for ourselves the country about which we had heard so much, and to wind up in the parlor, which is the capital city of Brisbane. We found the city very pleasant and our hotel a delight, so I believe it was a good thing we reversed the usual order, for the inclination

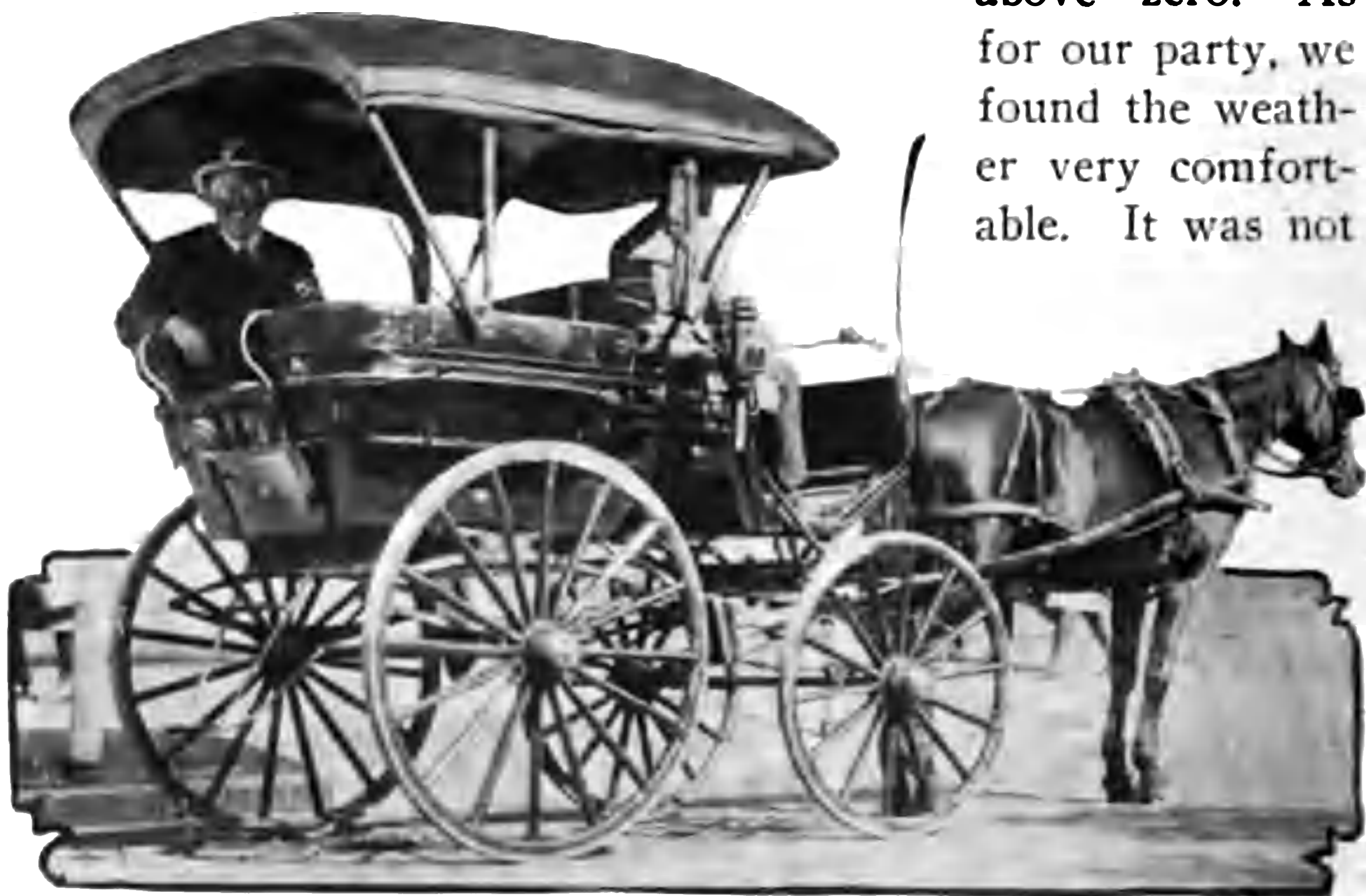
to fall into the habit, universal here, of taking things easy was hard to resist.

Our first view of the city was from one of those vehicles sometimes called "sea-going hacks." It was a full mile and a half from the station to the hotel, and the ancient steed which drew the hack along took his time about it, but we did not care. No one seemed to be in any great rush.

It was around the beginning of the Australian autumn and we discovered that the showers which fell at frequent intervals during our first day had been doing that same thing for a month. One day we awoke to find it raining, and it rained steadily all day. "But," said the first person I met, "this is very unusual weather, very unusual." And almost every one else said the same thing. So I looked up the official records and found that for the last ten years about half of the days had been wet ones.

During these same years the average summer heat was under 100 degrees and the greatest cold was over 36 degrees

above zero. As for our party, we found the weather very comfortable. It was not



A snap-shot of Mr. Boyce and the "sea-going hack" from which he had his first view of Brisbane.



A geological survey of the coal lands in Queensland says that in area it is vastly greater than the coal lands of England and Wales. One estimate says there are practically 79,000 square miles of coal land in Queensland. The Pennsylvania fields in the United States are within an area of less than 500 square miles. The picture shows the Tannymorel coal mine.

unpleasantly warm by day, and at night one could use a blanket with comfort.

From the window of my room in the hotel I could see across the street a dignified building a block long and almost as deep—the building which houses the parliament of Queensland, which has passed more freak laws than any other governing body, I believe, in the world. Queensland has had for many years a labor government with socialistic ideas and ideals, attempting by means of legislation to cure all the ills of the individual and the state.

The Labor party came into power in 1914. The cost of living was the issue and the rallying cry was “cheap bread, cheap beef and high wages.” When the reins of government were turned over to the Laborites it soon became evident that

they meant to attempt to carry out their pledges. They were going to substitute legislation for the laws of supply and demand, the real factors in determining wages and the cost of food. It is to their credit, of course, that they really tried to do what they had promised, but I find that now, after a thorough test, in spite of the legislation, the cost of living in Queensland is 94.6 per cent higher, while wages have gone up only 40 per cent.

Of course the end is not yet, but while we were in Brisbane the Arbitration Court, which determines wages in each line of work, in handing down a decision dropped a gentle hint that the limit had been reached and that it would consider no more applications for increases. It indicated in no uncertain terms its belief that the time had come when Australia, like the rest of the world, had to begin to think about bringing wages to a normal basis.

"And what is going to happen to the Arbitration Court when it tries that?" I asked a newspaperman who had long covered the court for his paper.

"Then the court goes blooey," he replied. "Labor will compel the government to return to collective bargaining."

Employers who have closed down because they felt they could not pay the wages awarded and make a profit have met disaster thru another law which compels any company to open its books upon demand of any union whose men it employs, and let the men determine for themselves whether the company can pay the wages or not!

The situation has its humorous side. In the hotel at which we stopped the woman owner was much disturbed by a new law affecting her staff of employees. For twenty years she had had the same cooks and had built up a reputation for a splendid table, to the truth of which I will gladly testify. Yet notice had been served on her that she must discharge these cooks because they were nonunion, and the union would not take them in. Instead she must take the first unemployed cooks whose names appeared on the union books.

"I went down and looked them over," she wailed. "Two



Queensland House of Parliament, Brisbane.

of them came from a sheep-shearing camp and the next ones on the list were ex-army cooks!"

Happy was I that we were leaving Brisbane before she should have to make the change.

The Labor party made an attempt to lower the cost of living by engaging in the various businesses which handle food products. It jumped hopefully into cattle raising and bought twenty-two ranches; it opened fifty-one butcher shops in various parts of the state; it took over five fisheries; it bought and equipped a fishing trawler for deep-sea work and opened shops for selling fish; it took over a meat-packing plant and a canning works; it installed a produce agency which proposed to handle all kinds of produce without paying profits to a middleman; and it opened its own hotel.

The state operates not only businesses having to do with the cost of food, it has tackled mining to the extent of six mines and the lumber business to the extent of four sawmills. It

has also a savings bank with deposits of \$70,000,000, a greater amount per capita than in any other state, and an insurance company, successfully handling all lines. The bank handles all the advances to settlers and for the erection of homes of workers. Unfortunately, these advances, once limited to small amounts sufficient only to enable a workingman to build a home, have been increased so greatly that men of means have been able to borrow enough to build expensive houses, so that the little fellow has often had to wait till the state gets in more money before he can borrow.

It cannot be said that any of the businesses engaged in by the state have been commercial successes, except insurance. The cattle stations are not yet paid for; the deep-sea fishing was found to be too expensive as the trawler had to go so far away from Brisbane that its cargo spoiled before it could get back. Other fish caught nearer the market cannot be sold at a profit after the state has paid the state-employed union fishermen for their catch. All of these undertakings must be paid



Treasury Building, Brisbane.

for some day, for they were bought on credit, but the payment will have to come from taxes and not from the profits of the business.

The railways, upon which so much has been spent, have shown a profit, it is true, but they have not been able to pay interest on the investment. They have taken the biggest part—about 52 per cent—of the money spent by the state under Labor control. The number of rail employes has been doubled, but in spite of that the number of train miles has been cut 10 per cent. Fares are low, as are other expenses incident to travel, but Queensland, with more miles of rail than any other state, had, in 1920, when interest charges were added to operating expenses, a deficit more than three times as great as the next highest state and took in less money per mile than any of them.

The test of sound government is sound finance. Judged by this standard, Queensland is the poorest governed state in the Commonwealth just now. About the time that our party was landing in Australia the papers were carrying many articles about the efforts of the state to borrow \$10,000,000 from the financiers of England, but which had met with no success. It struck me as rather strange that the state which every one in Australia boasted as one of the greatest in natural resources and with tremendous assets in the way of state-owned



The building in Brisbane which houses the general offices of the state insurance business. This is one of the best buildings in Australia.



No fewer than 700 boys and girls passed our tel in Brisbane, morning and evening, on their way to and from technical college. Their bright faces and healthy walk easily accounted for the wonderful race Queensland is producing. They are acquiring a practical education which some day will change the viewpoint of the state and save it from the logic of radicalism.

properties should be unable to borrow comparatively a small sum.

Two months after the London bankers had refused the loan I was in Brisbane, where I learned that the government had raised the ten million among the people of the state. "Well," thought I, "no matter what the British bankers may think, the people of Queensland themselves have confidence in their state and its ability to pay up."

Then I learned that only 5,000 persons out of the



A Queensland sawmill.



Queensland might be called a land of goats, for these animals are much used to pull small delivery carts in the smaller towns where trade is not heavy enough to justify the expense of a horse. It is no mark of distinction for a boy to own a goat in Queensland, for the chances are the boy "next door" has one, too. Goat races are quite common, as are teams of four to six goats for hauling in the rural districts.

700,000 in the state had subscribed to the loan, and accompanying this news was the intimation that the government, even then preparing to float another loan, proposed to pass a law requiring all the people to subscribe to loans in proportion to the taxable wealth.

Queensland owes \$327,500,000, the biggest debt per capita of any state in Australia. Unlike Western Australia, whose debt is as large, it has not been able to put any money into a sinking fund toward redeeming its obligations. The interest alone amounts to \$15,500,000 a year, and on its latest home loans the state has had to pay six per cent in order to get the money at all.

The revenues of the state, from taxation, railways, the islands attached to Queensland, licenses, etc., and the money received from the federal government as Queensland's share of the customs, has fallen far short of its needs. Yet taxation has been increased almost 300 per cent under Labor govern-

ment. In 1914 the rate was just under \$7 per capita ; in 1920 it was over \$20 a head of population.

When the Labor party was campaigning for office it held up its hands in horror at a state debt of \$250,000,000, yet since then it not only has not paid off any debts, but has increased them by \$77,500,000, over \$475 for every man, woman and child in the state. The revenue before 1914 was slightly more than the expenditures ; now the condition is reversed and there is a deficit each year.

When this government desired to borrow money in England, the British financiers and government refused to advance more money, but Queensland came to the United States and borrowed from the Standard Oil's New York bank.

Queenslanders, when you mention their state government to them, remind me of an audience which has gone to see a highly advertised show and finds it "so bad it is good," and



Meat works in Queensland for the most part are operated for the packing of beef, for, unlike other parts of Australia, cattle, not sheep, are the principal stock feeding on the state's rich ranges. Much American capital is invested in Australia's meat business. The quality of the beef is not as good as in the United States because in Queensland grain is fed only when drouth shrivels the grass.

who encore the players out of derision. That is what the Queenslanders did in the last election, for they returned the Labor government to power. The Premier is a Roumanian.

The only place where the Socialist Labor government of Queensland has made a good showing in doing business has been in the state government insurance department, where, during the last five years, the net amount passed to profit and reserve was over three million dollars. This business required no capital, as the whole state of Queensland was behind it. It is the one state business that all the states of the United States could successfully conduct at enormous profit, because the insurance business is only a capitalistic graft anywhere. The Queensland state insurance business is divided into three departments, the accident and workers' compensation forming one. This is practically conducted on the mutual plan. All employers who pay wages or salaries are obliged to insure with the state. This department is conducted without profit, the \$500,000 a year net earnings being on the fire and life insurance departments, which are conducted on a competitive basis with the old line fire and life insurance companies. Some years ago the government started to put up the building for a savings bank. Since that time the state has gone out of the banking business, but is finishing up the building for its insurance department. It is the finest building in Queensland and one of the very best in the Commonwealth of Australia.



Another picture from the "big timber" which is one of the chief sources of Australia's wealth. These men are getting out piles for South Africa.

DOMINION
OF
NEW ZEALAND



In many of its phases New Zealand mountain scenery vies with the Alps in beauty and grandeur. In this picture you are looking across Milford Sound, locked within its mountain walls, to Mount Pembroke, glacier girded and hooded with perpetual snow.

INTRODUCTION

NEW ZEALAND, a most interesting country in both natural and governmental history, has not commanded the attention it rightly deserves because of a mistaken notion that it is "over somewhere near Australia," and that, for all practical purposes, it is a component part of that continent.

It is a standing joke in New Zealand that even in Great Britain the popular idea of the location of these two countries is such that the average man at home sees no reason why residents of Sydney should not run over to Wellington by ferry and spend the week-end. It would require eight days of travel for the round trip to spend the week-end in Wellington if one resided in Sydney. The distance is 1,200 miles, or four days' sailing each way for ferry boats, and the fare for the round trip is one hundred dollars—approximately what we paid for first-class passage across the Atlantic before the Great War.

The naturalist will tell you that the differences between New Zealand and Australia are most fundamental. There was not a four-footed animal in New Zealand before Captain Cook, in 1769, made the natives a gift of some pigs. Australia had many four-footed animals native to it, all of them being marsupial—having a pouch in which they carry their young. The geologist will offer you as further evidence of the distinctive characters of the two countries the thermal springs district of New Zealand and the volcanic character of the mountains. The ethnological evidence will show you that the Maori natives of New Zealand are a race vastly superior to the black natives of Australia. The fact that New Zealand has seventeen ports naturally so deep that ocean-going ships can safely come up to the docks, while the seven major ports in Australia are comparatively shallow and have required much dredging, will

suggest to the layman that there are some very fundamental differences between the two countries.

The Maori natives of New Zealand are, perhaps, the most intelligent wild tribes with which the white man came in contact in early days. To the person who knows the native Hawaiian, the Maoris may not appear as wonderful as to the person who knows only the Maoris. The Hawaiian and the Maoris are undoubtedly the same race. They are of superior intelligence and quickly adapt themselves to the ways of the white man. The Maori is as far ahead of the Australian black as an educated Chinaman is ahead of a native African in his jungle environment.

The New Zealander takes very good care of the Maori native, but takes care, also, that there shall be no more colored people admitted to the country, for New Zealand has the most iron-clad "white man policy" in existence. If you go into that country with black, yellow, brown or red servants, you check them at the dock. Only white men and women are permitted in the country, and such arguments as the need of cheap labor for the rapid development of the country has no power to let down the bars.

This policy makes the country of unusual interest at this time when the colored races are awakening and demanding recognition.

I was impressed by the fact that I had to correct most of my ideas about New Zealand based on my reading. Having read so much about the radical things attempted there, I was prepared to find a country of agitators and soap-box orators. I found instead a sober-minded, determined population, well rooted in common sense. I found that the country's history in many phases of its political activities was not unlike the history of Kansas or the Dakotas. Many idealistic and, perhaps, foolish political panaceas had been advanced. Some of them got as far as legislative enactment. In the end, however, the good sense and practical temperament of the New Zealander asserted themselves and if there ever was an ambition to build a Utopia, before any real damage had been done, the



**Sutherland Falls, one of the most picturesque views in the
Milford Sound district.**

plans and specifications were changed to provide for human nature as it is and to encourage men to labor and produce by assuring them that they would reap the full value of their efforts.

New Zealand is in the insurance business. In this field it has made a wonderful success. There is nothing paternalistic in the program. It is straight business, without even politics in it. New Zealand has developed a business sense which it takes into politics. There is much Scotch blood in New Zealand. The Prime Minister told me that they tried to have the fewest possible people on the payrolls of the government at election time. In the United States, our national, state and municipal payrolls are substantially stuffed just before an election. The Prime Minister said they didn't want too many on the payroll because the employes would tell the government what to do. The New Zealander lives eight years longer than we in the United States, and, I suspect, he gets more out of every year of his longer life than we get out of each year of our shorter life. One factor in this exceptional mortality record may be that the New Zealander has used his political organization to minimize anxiety about the future on the part of those who work and devote themselves to productive business. With the insurance system offering maximum protection at minimum cost, with the absence of competition with colored labor, with access to the land on attractive, easy terms, with the absence of trust competition, the New Zealand laborer, farmer and business man knows that he will reap the present and future fruits of his own industry and effort.

In subsequent pages I have endeavored to present a picture of New Zealand as she is today, with enough of her historical setting to enable the reader to properly appraise the country's progress and to relate the outstanding features of her political, social and industrial life to the character and aspirations of the people.

To the Prime Minister of New Zealand, the Hon. W. J. Massey, I am indebted for cordial co-operation. Other government officials and many private citizens rendered valuable

service in making available to me materials and facts essential to the proper understanding of New Zealand of today. The uniform cordiality I encountered everywhere in the country made my visit of investigation one of the most pleasant of all my travels, and it could not be otherwise than that I should now have a very intimate interest in this outpost of white civilization in the South Pacific. As the Prime Minister said in a letter to me, written in February, 1921 :

“In our own way New Zealanders are building up a British nation in the South Pacific in much the same fashion as the Pilgrim Fathers of New England laid the foundation of the great American Nation of today.”

The following pages will, I believe, offer the reader a modern picture of this interesting country and these determined, liberty-loving people who share with us a passion for democracy and a common white ancestry.

W. D. BOYCE.



The New Zealand mountain daisy.



One of the outstanding figures in the contemporary political life of New Zealand is William Ferguson Massey, for the last nine years Prime Minister, and the leader of the Reform Party since 1903. He was born in the north of Ireland, sixty-five years ago, his parents going to New Zealand, in 1862, to be followed eight years later by this son who had remained behind to avail himself of the advantages of good schools. Premier Massey is more than a politician; he is a successful farmer and knows from intimate experiences the needs and problems of his people. He represented the Dominion in the peace negotiations in Paris and is one of the few big men in power during the war who have been retained in power since the war.

DOMINION OF NEW ZEALAND

PRIME MINISTER'S OFFICE
WELLINGTON.

2nd February, 1921

DEAR MR. BOYCE,

I willingly comply with your request to send a few words of greeting, on behalf of the Government and people of New Zealand, to our kinsmen in the United States.

In our own way New Zealanders are building up a British nation in the South Pacific in much the same fashion as the Pilgrim Fathers of New England laid the foundations of the Great American nation of today. We rejoice in the fact that, in the hour of the world's greatest tribulation, New Zealanders and Americans were found fighting side by side, on French soil, in upholding those principles of Truth, Liberty and Justice upon which both the British Empire and the United States have moulded their destinies. Could it have been otherwise with people of whom it has been so well written:

“We must be free or die, who speak the tongue
That Shakespeare spake; the faith and morals hold
Which Milton held.”

Under differing Constitutions we maintain our positions as the freest countries of the world, and we New Zealanders look hopefully forward to that day when the English speaking peoples will stand unitedly for the protection of the weak against those strong and ruthless nations who might seek, without such corrective influence, to hold them in bondage. The British ideal has been well pictured by one of our poets in the words:

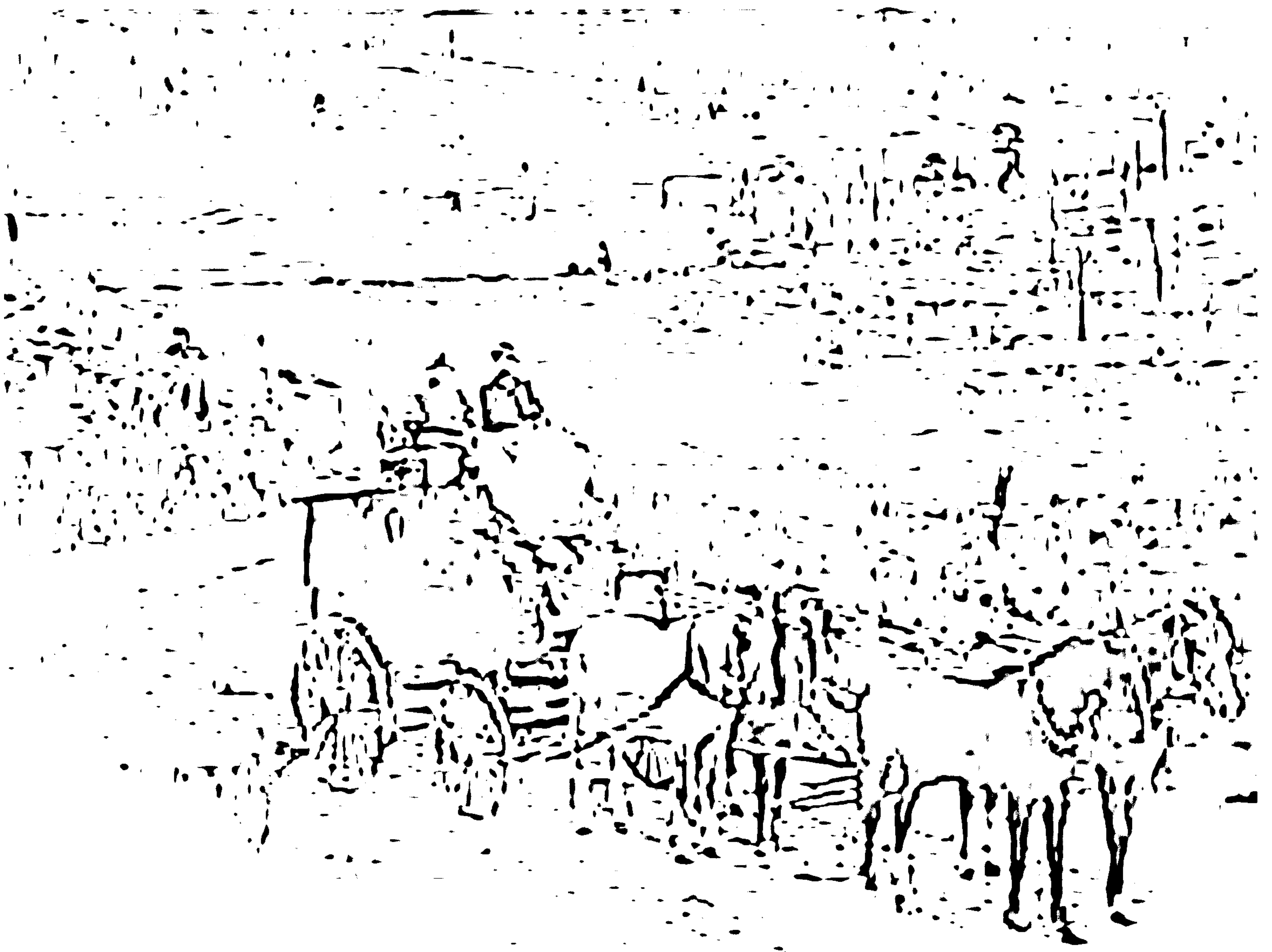
“Free voice, free aid, free counsel:—a free throne
By freemen circled, each respecting each;
A realm self-centred, yet with arm to reach
Where earth's oppress'd ones groan.”

That ideal we hold largely in common, and knowing we

have so much reason to respect and sympathise with one another, I say "Heaven grant that the Union Jack and the Stars and Stripes may ever wave together as the champions of the world's liberties." The people of New Zealand have naught but the most cordial feeling towards the citizens of the great American Commonwealth to whom they send, through me, this expression of good will.

Yours sincerely,

J. Massey



A western New Zealand stage coach.

THROUGH OTHER EYES

(FROM THE WELLINGTON, NEW ZEALAND, EVENING POST)

A PROMINENT Chicago journalist, Mr. W. D. Boyce, has been a visitor to New Zealand for the past five or six weeks gathering information about this country. This evening he leaves by the *Manuka* for Sydney and America. Yesterday, during a conversation on matters American, he was asked by a Post representative to state what to-day was the national aim of the United States. Mr. Boyce said that his country's national aim had been in the past to furnish a home for the people of other countries who desired to improve their material condition.

"The present policy of the United States," said Mr. Boyce, "as nearly as I can make out, is to keep the United States for the people of the States—within a reasonable degree."

"What do you consider or what do you gather to be, from your observations, the national aims of New Zealand?"

"From all I can read and see," said the visitor, "the national aim of New Zealand is to keep the Dominion for New Zealanders—to keep it free from the taint of coloured races and the influence of undesirable immigrants, and to develop it for your own people." The Government of New Zealand seemed to have been for the people and for their benefit "from the year one." From the Prime Minister downwards everyone with whom he had spoken seemed to be thinking first and foremost of their country and its welfare—how to make it a better New Zealand. That, to him, seemed to be the national spirit here, when New Zealand possessed a population of five millions it would then have inhabitants equal, in proportion to area, to the United States. But New Zealand, in regard to population

was heading along such well-defined lines that she was not likely to make the same mistakes as America in admitting undesirables.

“What impresses me most about New Zealand,” Mr. Boyce added, “is that you have solved a problem that worried us greatly, and that is the handling of trusts by the establishment on definite lines of such businesses as the Public Trust and the Fire and Life Insurance Departments, which have had the effect of regulating competition and prices.” New Zealand, he said, was like America, in that we were a people living on the soil. That was the basis of our life. And while we had made it attractive to large holders of land where it was necessary to open up the country quickly, we seemed to be following a very sound system in trying equitably to divide up the land into small holdings. Of course, New Zealand, like the rest of the world, had its industrial problems, but from the study Mr. Boyce had made of the situation, he considered Labour had little to complain of so far as the general conditions were concerned in New Zealand. The extremists seemed to be making up in noise and strife—disturbing factors—what they lacked in numerical strength; but he ventured to express the view that the sane, moderate men would eventually shake off the influence of the agitators and realise that evolutionary, not revolutionary, methods were in the best interests of all concerned. “The sane New Zealander, from what I have seen of him, is a fine, sturdy type capable of thinking for himself, and with plenty of initiative, and he will not allow himself to be chloroformed by the pernicious doctrines of wild irresponsibles.”

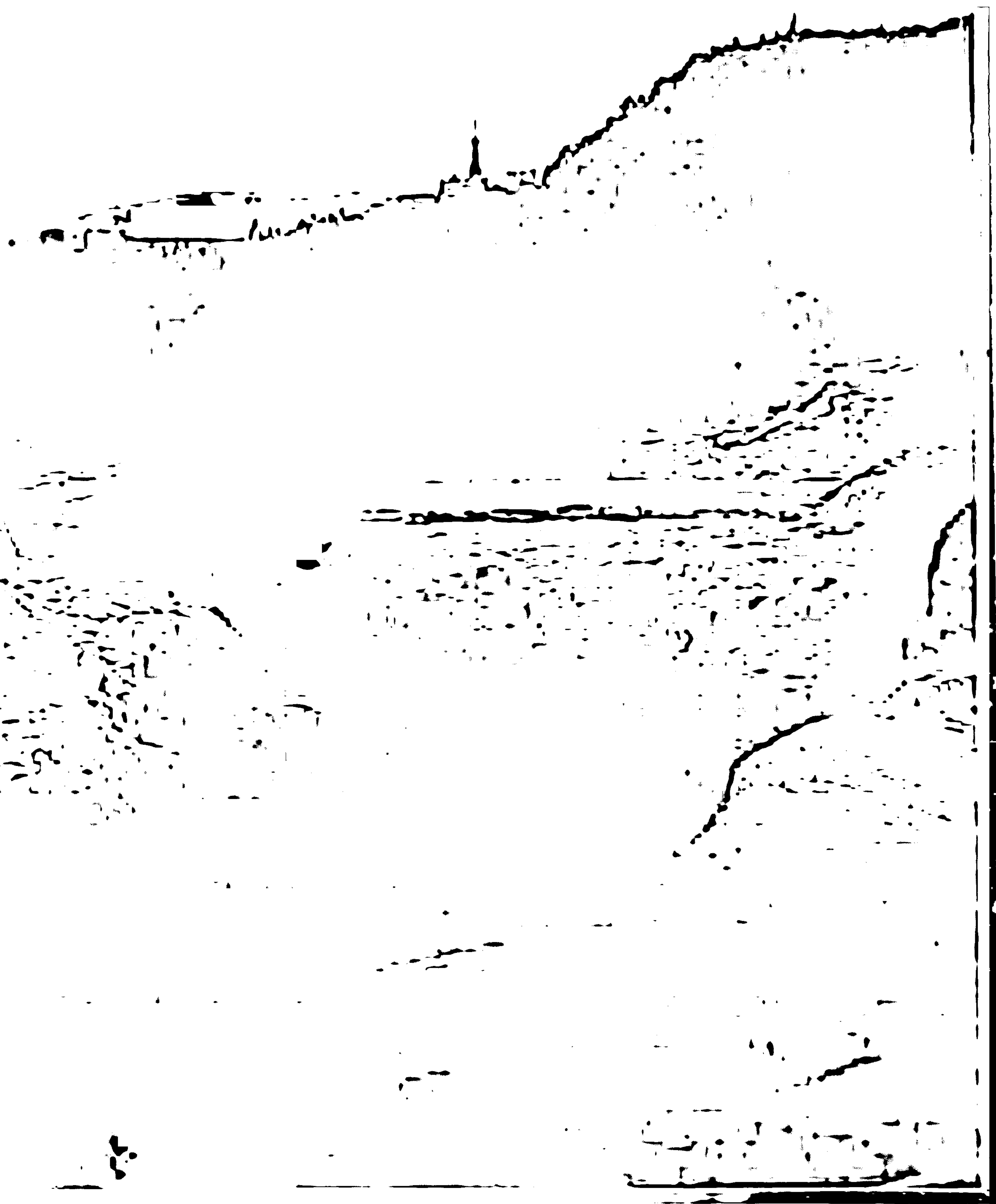
“The people of your country appear to me to be naturally a saving, frugal people,” said the visitor. “They do not seem to spend all they make. The only evidence I have seen to the contrary is in the waste of alcohol. The homes of your people are well kept up, there are no excessively large houses, and the people dress well.”

As a sheep and cattle raising country Mr. Boyce spoke enthusiastically of New Zealand and its possibilities. It was the

best in the world, because of its soil, its plentiful rainfall, which gave three grass-growths, and its numerous stock-watering creeks and rivers. In dry parts of Argentina and America the great problem was to get water for stock. The visitor was equally complimentary on other phases of New Zealand life, upon the health of the people, the average age longevity, which now showed the highest average in the world, and the possibilities of the future.



Highland cattle, a picture from Otago Province, New Zealand.



A view of the boiling pool of Pehutu Geyser.

CHAPTER I

EARLY HISTORY AND THE MAORIS

IT HAS been said that in the two islands of New Zealand can be found anything found elsewhere in the world. The climate ranges from Arctic coldness on the mountains to tropic warmth on the coast of North Island. Volcanoes, hot springs, geysers, glaciers—New Zealand has them all. Practically every fruit and grain can be grown somewhere on its varied soil; and nearly every domestic animal finds the country more to its liking than the land from which it came.

Ask almost any one where New Zealand is and he will tell you that it is over on the other side of the earth somewhere, near Australia, and he guesses it is pretty hot there because it's south of the equator.

New Zealand is more than a thousand miles from Australia—farther than Chicago is from New York. The north end of the North Island lies as far south of the equator as North Carolina does north of it, and the South Island lies as far south of the equator as Maine is north of it. Nor are they the tiny specks on the ocean that they seem to be when we look at a map of the Pacific Ocean. North Island, with an area of 44,648 square miles, is practically the same size as Pennsylvania, while South Island, 58,525 square miles, is



A Maori war canoe.

larger than Illinois. The combined area of these two and smaller islands in the group is 104,751 square miles, which is greater than the area of the seventh largest state in the Union, Colorado.

As in Australia, the dominating race is British, the native Maori population being only 50,000 out of a total population of 1,250,000. Yet the Maoris (pronounced Mowries), as the natives are called, are still to be reckoned with. In fact I found them as interesting as the scenic wonders of which New Zealand justly boasts.

It was at Rotorua, the "Yellowstone Park of New Zealand," or rather at Whakarewarewa—called "Whaka" for short—two miles from Rotorua, that I had the chance to study the Arawa tribe, the largest and most interesting of the twenty Maori tribes now in existence. Nowhere in the world have I found another people just like these, nor any so quaintly primitive.

Where the Maori came from originally, no man knows. They themselves have a legend that tells of a great tribe centuries ago which, weary of continual battling and inspired by the dream of a medicine man, set out in a fleet of war canoes, and after many weeks of alternately being driven by tropic storms and patient rowing thru becalmed seas, landed on the coast of North Island. There they found a veritable paradise and uninhabited.

But the place from which they came has never been located definitely. Learned scientists have found what they consider ample proof that the Maoris came from Hawaii. Others pick out Tahiti or Tonga as the original home, while equally learned men claim to have discovered in the United States carvings and utensils which indicate that at some far-distant time the Maoris roamed the North American continent. But it seems certain that they are Polynesians in every way and are related by blood, however far back, to the natives of some of the South Sea Islands.

The Maori of today is able to trace back his family line for many generations, some of them being able to repeat parrot-



Mr. Boyce standing in the entrance to one of the "pas," which were the forts of the Maoris in war. The gates were barely wide enough to admit one person at a time and were ornamented with typical Maori wood carvings. In carving, the Maori would start at one corner of the timber and cut out the figure in detail as he went along. He laid out no design other than in his mind, yet when the work was completed both sides were found to be as nearly identical as if they had been planned with calipers.

like the names of their ancestors for as many as forty or fifty generations. But when it comes to concrete facts as to their history and origin before the white man (*paheka*) came, they are dumb. A study of their legends gives one a large collection of fanciful tales of impossible happenings which cannot be linked with any other known facts of other peoples.

Certainly the old-time Maoris never handed down to their sons the record of the tribes of hundreds of years ago, while the shortness of their memories is demonstrated by the fact that when Captain Cook visited them in 1769 the Maoris had no knowledge of the fact that a hundred and twenty-seven years before Abel Tasman had been there and had had a battle with them because of his inability to understand that they were peaceable.

Badly frightened as the natives had been by the appearance of these strange white men and their great ships, their chief sent a herald to announce that he would visit the strangers aboard their ships. But when the chief set out from shore with several canoes of warriors, Tasman sent a boat to warn his second ship against treachery. The boat collided with one of the canoes and at once the Maoris, thinking they were attacked, began to fight, killing four sailors. Tasman at once fired a broadside into the canoes and then left.

Tasman's account of what little he saw of the Maoris, altho he did not set foot ashore, described them as so bloodthirsty and warlike that the islands were shunned by white adventurers for more than a century. When Captain Cook came he was not so easily daunted as Tasman had been, and, in spite of the unfriendliness that the natives at first showed toward him, he remained for six months, sailing around the islands. He was never able to go far inland because of the constant wars between the various Maori tribes, but from those tribes with which he came in contact we get the first authentic record of this interesting people.

The Maori of old belonged to a straight-limbed, haughty and warlike brownish colored race. Altho all of them sprang from the same source they never yielded to the leadership of

any of their own number. Tribes were formed by close blood relationship and each tribe was a law unto itself. Today the same condition exists. There are a score of principal tribes, each divided into minor tribes, between which there exists bad blood, instigated by some outrage committed hundreds of years ago, the cause being unknown now. The old Maori was fond of tribal meetings, at which all questions affecting the tribe were discussed and decided, women having an equal voice with men. The same conditions are the basis of tribal self-government today, with modifications caused by the coming of the white man.

So strong was the ill-feeling between tribes that for a time the villages were deserted and the tribes lived in a constant state of war, being always prepared for war inside their "pas," or forts. Trivial incidents, such as the burning of a war canoe by another tribe, led to long and bitter warfare. This would finally involve every tribe on the island. There were occasional periods of peace. Then came the white man. He rode roughshod over the natives, as has always been the case, violating all their sacred traditions. Finally this caused war between the whites and the natives, which terminated only when enough natives had been won over to help the whites. The Maori was shrewd, fighting in his own way, in his



Thinking of the old days. Surrounded the astonishing civilization of today, this woman remembers when the Maori native pitted his cunning and crude weapons against the white invaders. The tattooed chin is in keeping with the best Maori customs.



Here is an old-timer who has many a story to tell of the days when Maori and Pakeha (white man) were fighting to see who would be supreme in New Zealand. Of the old-time friendly Maoris, whose help in their younger days aided the white soldiers to put down enemy tribes, only a handful remains.

of fancy and intricate wood-carving which is the admiration of visitors from all over the world. Not daring to go outside, the men turned their attention to carving.

With wonderful skill and patience they carved weapons and ornaments from granite and the ironlike greenstone, and the women, equally clever, fashioned garments from rough flax and feathers from the gaudy colored native birds.

Where the savages of other races painted their faces for

own forests and mountains, where the white man was not at all at home.

The Maoris have a strain of sporting blood in them. This is demonstrated by the story of a battle of fifty years ago. The white soldiers had ceased firing and the Maori chief sent out a flag of truce to inquire why. "We are out of powder for our guns," was the reply. Obviously the game couldn't go on if the white man had no powder, so the chief sent half of his own supply to the white men in order that the battle might be resumed on even terms.

It is believed by those who have made the subject one of close study that the Maoris' infinite patience was born during those long war periods inside their fortresses. It was then that they developed the art

war with colored mud, the Maori, who had proved his courage as a warrior, was permitted to have tattooed upon his face, limbs and body fantastic designs, each with symbolic relation to an event in his own life or that of his ancestors. The women tattooed their lips and chin, giving the effect of a beard growing there. This custom still exists.

The Maori man was not an adept at making things which had no connection with war, for first of all he was a fighter.



The Maori was a famous wood-carver. These carved door lintels show the accuracy of his work even though he made his design as he worked rather than resorting to a pattern.



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A Maori chief whose tattooed face tells story of war and great deeds. Each line has a meaning to those who can read it. It is said that a Maori chieftain, who went to England, warned an artist who was painting his picture to be sure and get in all the lines, as they were a record of his personal history. It was those of extreme youth and lack of courage who did not have tattooed faces fifty years ago.

often occurred. No sympathy for a wounded enemy or one who could not fight back stirred the Maori breast. It is hard to associate the childlike, fun-loving Maori of today with the cannibal of sixty years ago. Not that he ate his victims from a love of flesh, but because he wished the full victory over his

His fish-hooks were big and clumsy, made of shell with barbed points. He did not need many gardening implements. There was no big game, hence no necessity for hunting weapons. It was only after Cook came that pigs were known on the island. The sun was obscured at times with flocks of wild pigeons, which were trapped by ingenious methods. Nature made it easy for the Maori man. There is no characteristic pottery nor vessels of metal in Maoriland. Homes are simple affairs of thatched straw, as there are no extremes of climate that require more than bare shelter.

As a fighter the old-time Maori was relentless and cruel. Unlike our American Indian, he was not treacherous nor did he strike in the dark. When he went out to fight he wanted full honor for the killing. He delighted in hurling insults at the enemy. He made faces, sticking out his tongue in defiance to the enemy to come and cut out that tongue, which

enemy. Surely there could be no greater victory than being able to eat the victim. Women were forbidden to eat human flesh and would have been ostracized for doing so.

The Maoris' sense of humor was highly developed, and in the days when wars were the common thing quite often what was intended as a serious fray turned out to be a farce because of some unexpectedly humorous twist given it. In one instance a few Maori warriors had been besieged in a fortress by an overpowering force of the enemy. Seeing that it was inevitable that they were going to be eaten, the chief called his warriors together, and, while the enemy outside was indulging in a war dance, he marched his little force out, bearing aloft pots and kettles in which their victors might cook them—bearing their own coffins, you might say. When the other chief saw this his sense of humor won out, and in a few minutes they were all embracing in warmest friendship.

Two ancient customs of the Maori were in their day probably the most effective means of checking crime ever originated by a primitive race. One was "muru"—the plundering of those who were guilty of some breach of tribal law. It is true that quite often the law of muru was taken advantage of and a person might be pillaged for something that could not possibly have been his fault. Muru was something like our own law of damages, except that the ones who felt themselves offended—it might be a whole tribe—fixed the amount to be paid and then did their own collecting.

Suppose, for instance, that a man had accidentally killed a boy. As soon as the boy's



This picture of a dried tattooed head of a Maori chief shows how far the old-time natives went with this form of facial adornment.

relatives learned of it they would march in a body to the home of the offender. One of their number would announce his intention of killing the man, and the two would engage in a battle to all appearances most deadly in character. The first scratch, however, would be sufficient to end the duel, and then the mob would ransack the house of their victim and cart away everything he owned. At the same time they would help themselves to food which he, having been warned in advance of their coming, would have ready—while he sat quietly by and chatted with the avengers.

Susan, the Maori who guided us at Rorua and made friends of every one in party. She speaks English well and is as gracious as a society leader. Like white sisters, Susan declines to reveal her age, but admits she is a grandmother. In her youth she must have been a beauty.

The second law, or custom, was that of "tapu." To have a thing tapu was to have a spell cast over it which made it sacred and reserved to certain uses or certain

persons. Thus a chief, his family and belongings, were tapu. Certain places were tapu; certain foods were tapu—or tapu to certain persons; certain animals were tapu and might not be molested. So strong was the native belief that harm would befall those who violated tapu that cases have been known where a Maori, tho in perfect health when he ate food that was tapu, would die in great agony a few hours after learning of his offense.

Maoris of today are living under the terms of the Treaty of Waitangi, signed on February 6, 1840, when the Maoris took the oath of allegiance to Great Britain and in return were promised protection and full possession of their lands. This treaty, however, has been modified in various ways. The land court consists of one white judge and two native assistants;

the court is seldom called in when one native wishes to sell to another, but when he sells to a white man there are many tangles to straighten out. Often as many as twenty claimants appear for a single acre of land. I learned of one tract of eleven thousand acres that was claimed by 2,486 Maoris; the court was a year in settling the case.

The Maoris still own about 4,000,000 acres of first-class land out of the 66,000,000 in New Zealand. Unfortunately, when a native parts with his land the money is paid directly to him and he soon spends it. Government regulations, however, provide that the Maoris cannot sell their lands below the point where they retain an average of fifty acres each.

Altho they have taken on civilization better than any other savage race I know, and in spite of the fact that they have adopted most of the white man's good things without succumbing to his vices—with the exception of drink—less than 50,000 Maoris remain in New Zealand of the half million that Captain Cook estimated as being there when he made his investigations. All but 100,000 of these perished, it is true, in an epidemic



A modern Maori belle.



These graceful Maori maidens are doing the "poi" dance, which takes its name from the little balls made of flax covered with the inner bark of cocoanut and which are swung in rhythmic movements during the dance. There are many movements in the poi dance, each representing a definite thing, such as a fluttering butterfly, the rowing of a canoe, a soaring bird, and so on.

resulting from the eating of some sick sailors from a wrecked ship. It is the opinion of many that the decline of the race has now been checked and that a steady increase may be expected. In the last few years the birth rate has crept slightly above the death rate, but a lot of it is white blood.

Were the curse of drink eliminated the Maori probably would hold his own. As it is, the men are not permitted to have drinks served to them over the bar but can buy a bottle. The women, supposedly, cannot have a drink at all, but the "scallawag," as New Zealand bootleggers are called, is ever at work, and for a few dollars will sell to the natives a vile concoction almost as terrible in its effects as wood alcohol.

It was Susan, venerable grandmother who bears her years well and is immensely proud of the fact that her three sons fought on the side of Great Britain in the late war, who piloted us around and explained what we saw at Whaka. She was clad in a calico dress, a linen duster and a wide-brimmed white hat. Years of guiding strangers from far lands has given Susan a polish and a speech that would grace a ballroom.

It was early the morning after our arrival that Susan, having been hired the night before, telephoned us that the geysers at the village of Whaka were staging one of their infrequent displays and insisted that we hurry out before they quit. I tried my best to be enthusiastic over the column of boiling water, but it was shooting only fifty feet, less than half the height of the geysers in Yellowstone Park. I saw one old dame standing with her feet in the edge of a little stream of running water from one of the hot springs, beating her day's washing with a flat paddle. I stuck one finger in the water and found it unbearably hot, but the old woman apparently did not mind it. In nearby concrete pools some boys were taking an "oil" bath in water that was quite warm and soapy to the touch.

Near the village stands an ancient "pa," or fortress. Its sides are made of stout sticks lashed together and coming together at the top in sharp points which made it difficult to scale. At intervals poles stand up above the barricade, topped

Yes, the Maori has his jazz dance. He calls it the "haka." It is an ancient dance, which preceded battles of consequence, and was used for physical development, as it calls into play virtually every muscle of the body. Stamping of the feet, sticking out the tongue, and grimaces calculated to frighten the enemy were features of this dance. In the lower picture the women are putting on a burlesque haka.

with carved figures of human beings with gargoyle faces, which the simple Maori believed would frighten his foes. In olden days no doubt the gargoyles were replaced by human heads.

It was my good fortune to see here, with the "pa" as a background, some of the native dances, both of war and of peace, which are so infrequent now that many of the tribes have abandoned them altogether. As the dancers approached, it did not require much imagination to believe that time had slipped back a few decades and that these gayly garbed folk were the savages of their forefathers' day.

The men started off with a "haka," a dance that was both a war challenge and a ceremonial affair. Weird chantings accompanied the movements of the body and the stamping of feet. Almost every muscle of the body was brought into play, including those of the face. Horrible grimaces and the sticking out of the tongue seem inseparable from a Maori war dance.

In direct contrast to their display of strength and bulk were the "poi" dances staged by the girls. Here graceful movements of the limbs and body keep time to the haunting melody of a chant in a minor key, while two poi balls are tossed in perfect rhythm. These poi balls are made of flax, covered with the inner bark of the cocoanut tree. They are about the size of an orange and are held in the hands by means of a piece of string, usually one long one and one short one.

Every poi dance has its peculiar movements meant to represent something, as the fluttering of butterflies, the flight of birds. In one, called the canoe dance, the girls sat down and in perfect time pretended that they were rowing one of the old-time war canoes.

I saw the ceremonial with which visitors are received. Altho well aware that company was coming, the family sat in front of their home until the visitors arrived. Then they intoned a chant, waved aloft green sprays in token that friendship would never wither, then solemnly rubbed noses with

each visitor in turn, while at the same time they clasped hands.

Quite often I have heard a man in the United States say he was glad he had not married his wife's family. A Maori cannot say that, for that is just what he does. His wife's relatives are at all times privileged to make themselves at



Mr. Boyce and Captain Mair (at right) as spectators at a Maori dance near Rotorua. The Maoris have adopted Captain Mair as their parent, and he has been their friend and adviser for many years.

home in his house and he is under obligations to feed them.

Marriage customs are still primitive, altho betrothal of infants is now rare. There is little courting as we know it. The family of a boy or girl picks out an eligible mate and makes overtures to the other family. The pair can of course decline to marry, but where the match is thought desirable from a tribal standpoint, as where it will keep together large tracts of land, the whole tribe masses to overcome the objections.

The marriage ceremony is very simple, being merely a statement that the man and woman have decided to live together. In olden days elaborate rituals preceded and followed the ceremony itself. There was much giving of presents. One quaint custom was the picking out of two mountains, calling one a man, the other a woman, and "marrying" them, to indicate that the lands of the contracting parties were being united.

No Maori man was allowed to marry in the old days until he had been thru the "red house," where for two or three years he underwent a rigorous education in the art of warfare, genealogy, astronomy and mental training. I had an inkling of the thoroness of this training when I learned of an old chief who knew the words and tunes of nine hundred native songs. It was also a custom to require that a man should have killed another in a fight before he could marry. Marriage between cousins, even second cousins, was forbidden. Divorce was simple, being accomplished by merely separating and announcing the intention to live apart.

A funeral is a prolonged affair of several days, in which the mourners gather about the home of the deceased, whose family must feed them. The mourners bring to the funeral all the gifts given them by the departed one during his lifetime, carefully wrapping them in mats to show they have been treasured, and piling them about the body. Later the relatives return them to the owners, after which the gifts are theirs to do with as they please. Giving away a present during the lifetime of the donor is unheard of.

Nearly 10,000 Maoris attend the native and public schools.

There are 119 public and 12 private schools for Maori children. Lessons are given in English, the Maori language not being taught in the schools. In some of the schools trades and farming are taught. The natives take easily to education; especially is this true of the children. They talk well, spell rapidly and correctly, and, in general, are quick to learn.

That the Maoris are an intelligent people is quite evident from the success of many of them. They are quite proud of the fact that they are represented by four elective members of the Dominion House of Representatives and two appointive members of the Legislative Council, which corresponds to our Senate. Several of the race have risen to high positions. One, Sir James Carroll, has been knighted and made a member of the Dominion cabinet.

They are well represented among the professions and several have become millionaires in agricultural pursuits. How far the new generation will go, educated in the public schools and imbued with the high ideals of the white man, is hard to forecast. They show no trace of negro blood.

No *résumé* of Maori history would be complete without reference to Captain Gilbert Mair of Rotorua. Born in New Zealand, he has spent sixty of his eighty-one years with the natives, and probably knows them better than any living man. Captain Mair was a soldier in the wars which ended in 1874, and commanded a contingent of 500 friendly Maoris in the chase after old Te Kooti, most notorious of all the rebel chiefs. The chase became so hot that Te Kooti's forces dispersed, and in the days of peace which followed, Captain Mair held many official positions in which he was constantly in touch with the natives. He was judge of the native land court at Rotorua and his handling of that office, as much as anything else, won for him the confidence of the Maoris. He is an adopted chief of the Maoris, their confidant and "parent," as they call him, and has a tremendous influence with them.

I had a most enjoyable visit with Captain Mair, and was,

of course, much interested in his estimation of the present-day native.

"The outstanding traits of my old friends have mostly been lost," said Captain Mair. "The white man introduced alcohol to the Maori, and, even today, tourists delight in supplying drink to the natives in the hope that while they are drunk they will give a better 'show' than they otherwise would. The \$250 fine provided has not stopped this practice. The Maoris are, however, a trusting, lovable people.

"The modern native is developing one tendency which I regret. He is losing his ability to tell the truth. The old Maori would not lie to you. Even today, if you drive him into a corner, the Maori will admit that he has been lying and will tell you the facts; his conscience seems to hurt him, and, at best, he is a blundering liar and his delinquency is easily detected."

Captain Mair is disposed to the belief that the original Maoris came from India, gradually drifting into the Pacific, and that other Polynesian races are merely offshoots from the main body which came to New Zealand. He points out that the old Maori excelled in the water, that he was a sailor and not a landsman and that, of all savage races, the Maori of old best understood navigation and could guide his canoe by the sun and stars. Only such people could have made safely the rough voyage of many months to New Zealand, in frail outriggered canoes, as did the original settlers.



This is Wihi, the belle of Waka. She seventeen and has a wonderful smile. Wi says that the name in English would "Fraidy Cat," but she doesn't think it fits. She is a skillful "poi" dancer.



A road in the "back-block" bush of New Zealand.

CHAPTER II

NATURAL HISTORY—WILD GAME AND SPORTS

THAT lucky person who has seen the wonders of New Zealand need not travel over the world to see others, better known tho they may be. It seems as if some mighty hand had gathered up a few each of all the wonders of the world and let them drop upon these two islands which make up New Zealand. Here you can see snow-capped mountains comparing favorably with the scenic grandeur of the Alps, deep blue fiords, boiling springs, rumbling volcanoes, magnificent rivers and dense forests.

But it is the thermal springs district that attracts most attention among travelers. There are hot springs and similar attractions in other parts of the world, but nowhere in so limited a space is there quite such an assortment of weird things. Fire and steaming lakes, pools and streams, deadly gases from craters, spots unbearably hot in pools that are otherwise icy cold, boiling mud and geysers, caves and grottoes. Over them all hangs the smell of sulphur, tossed here and there by vagrant winds, but following wherever you go, until you are glad to get away. The Maoris still cook food in the boiling springs as did their forefathers.

The story of how the mountain Tarawera erupted in June, 1886, is



This Maori girl is going to boiling water spring to cook dinner.

an interesting one. For several days before the eruption there had been considerable grumbling and growling, but neither the whites nor Maoris were alarmed. Six months before there had been many changes in the volcanic region. Geysers which had been spouting for years suddenly stopped. Thousands of fish were cast up on beaches, much as if they had been poisoned. The crater lake in White Island went dry. Then steam began issuing from the top of Ruapehu, a dead volcano. Tarawera is the Maori name for Burning Peak, but there was no tradition of any eruptions ever having taken place. In fact, the Maoris had so much confidence in old Tarawera that they once buried a famous chief there and believed that Nature would never disturb his grave. But one night shortly after midnight there were several quakes which were followed by roaring, booming noises. The natives took to their heels. Suddenly a huge cloud burst from the crater of Tarawera and a shower of stones and dust and fire spurted forth. The explosions were heard five hundred miles away. An electric storm burst forth at the same time, all resulting in a magnificent yet terrifying spectacle. Then over all settled a darkness that lasted many hours.

At the same time occurred the explosion of Lake Rotomoana. There is a well-founded theory that the waters of the lake broke thru an underground channel into the red-hot interior of Tarawera and caused the explosion. This eruption wiped out the beautiful Pink and White Terraces, vividly colored ledges over which hot water trickled into a basin below. Today, almost thirty-five years later, there is still a feeling of desolation in the region which was destroyed by Tarawera.

Around there you find deep pools of oil and fuller's earth bubbling away. Rivers where the water runs cold over burning hot sand, where you can catch a fish in one place and a short distance away you can cook it in the boiling water, just the same as in our own National Yellowstone Park. There are depressions in the volcanic rock that hurl out handfuls of mud at frequent intervals. One mud geyser gets its



A view of the geyser basin and Rotorua Lake, from the mountains at Whakarewarewa.

name, Packhorse Mud Geyser, from the fact that it was not a geyser until one day a pack horse fell in. It was just a bit of still mud and water, but it contained sulphuric acid. Some scientists claim that the fat in the body of the horse caused the geyser, just as some of the geysers are dormant until soap shavings are thrown into them. There are several such in the Rotorua district.

One of the volcanic wonders of New Zealand is White Island, twenty-seven miles from the mainland in the Bay of Plenty. It has a rocky shore and only when the sea is very calm can a boat land. It is one vast bed of sulphur, steaming hot. The ground breaks treacherously under your feet and eats the soles off your shoes in a few hours, or will burn thru



Crater Lake and blow holes of White Island, a quaking mass of rock, clay and sulphur, twenty-seven miles off the mainland of the North Island in the Bay of Plenty. The whole island is a mass of soft sulphur thru which it is easy to break and which quickly destroys shoes or clothing which may come in contact with it.

your clothes if it touches them. Once White Island was worked for its sulphur, but that was given up. Besides White Island there are two other volcanoes that display activity, making one think some day they may repeat the scenes which followed Tarawera's outbreak. They are Ruapehu, 9,175 feet high, with glaciers on its upper slopes and a hot crater lake, and Ngaurehoe, youngest of them all, from whose summit, 7,575 feet high, there issues at all times little clouds of steam.

There are many lakes in the North Island which are well worth seeing. There is Lake Taupo, the largest lake in New Zealand. It is 1,200 feet above sea level, 500 feet deep and is famous principally for the excellent fishing which it affords. Sheer cliffs line the western side, rising abruptly to great heights. In flood times a great volume of water pours over these cliffs, creating a wonderful waterfall as it cascades into the lake. On the opposite side of the lake there are sloping sand beaches interspersed with terraces of pumice covered with trees.

A hundred miles south of Auckland are the Waitomo Caves, something like our Mammoth Cave in Kentucky, only not so large. Here there is one room called Glowworm Grotto, whose dark depths are lighted by thousands of glowworms on the walls and ceilings, which shed a light by which it is possible to discern objects quite clearly.

New Zealand has one river that surpasses all others in scenic beauty. It is the Wanganui, whose canyon-walled waters fall 500 feet in its length of 150 miles. At intervals there are rapids down which the flat-bottomed steamer descends with remarkable ease. In spots the high cliffs give way to densely wooded stretches that line its banks. Here and there are villages, bearing the familiar names of Jerusalem, Damascus, Athens, Galatea, and so on, showing the influence of early missionaries.

There is a Maori legend connected with Mount Egmont, a beautiful volcanic cone which stands isolated on a plain north of the town of Wanganui. Egmont, so the legend runs, fell in love with the wife of a brother mountain, but the lady did

not return his affection, and together she and her husband began to belch forth stone and rock and hot lava on the head of poor Egmont until he was glad to get away. He ran and ran until out of reach of the angry mountains and now rears his head in stately grandeur, alone, unloved, but greatly admired.

At the south end of the west coast of the South Island are fourteen sounds, arms of the sea stretching inland from six to twenty-two miles, of which Milford Sound is the



Pompolona hut, from which one begins the journey over the Milford Track, New Zealand's most famous scenic trail. The government maintains huts such as shown in the picture for the benefit of travelers who undertake the twenty-six mile hike from Lake Te Anau to Milford Sound.

most interesting. All of these sounds are deep hollows excavated by glaciers in days long gone by, their walls so steep that they are virtually unscalable.

In the days before the war the government tourist bureau ran steamers into the sounds at frequent intervals, and the service will soon be resumed, but during my visit only a supply ship once a year made the rounds of the lonely lighthouses on the rocky headlands. So the only way the traveler can reach them now is by taking a coach, a steamer on Lake Manapouri and then walking. Lake Manapouri is a beautiful body of water which in rainy periods is fed by great waterfalls from the cliffs surrounding it. Beyond it lies Te Anau, the second largest lake in the Dominion, and at its head begins Milford Track, which New Zealanders have named "the most beautiful walk in the world." It takes three days to pass thru the mountains, the valleys and forests to Milford Sound, but the trip, any time between November and April, when the track is free from snow, is one succession of scenic beauty. Along the tracks are huts maintained by the government for the care of travelers, where they may find food and beds.

Milford Sound is well worth the toil involved in getting there. It is hemmed in by 5,000-foot mountains around whose heads the mists are always playing and down whose sides great cascades and cataracts tumble on their way to the sound. None of the other sounds equal Milford, and only ten of them are visited very frequently by travelers.

Stretching north from the sounds along the western coast are the snow-capped Southern Alps. Of them, Mount Cook, which the Maoris call Aorangi, "the cloud piercer," is the most imposing. For many years the New Zealand Alps have attracted mountain climbers from all parts of the world, partly because they are not tourist-infested, but chiefly because many of the heights are more difficult than the famous peaks of the Old World.

They present from their summits the strange sight of sea and forest on one side and grassy plains on the other. Of the glaciers in the Southern Alps, the most spectacular is Tasman



The Southern Alps on South Island are of wonderful majesty and beauty. Hochsetter Ice Falls is shown in the picture. It is a frozen cataract coming down from a great snow plateau 9,000 feet above the sea. The fall is 4,000 feet and ends on the Tasman glacier.

Glacier, a river of frozen snow, into which half a dozen ice streams seem to flow. Its surface presents dangerous fissures, and avalanches are frequent.

Still farther north are the passes traversed by small steamers plying between the North Island and the west coast ports of the South Island. For years French Pass had a singular claim to distinction because thru its waters ships often were piloted by "Pelorous Jack," a fourteen-foot dolphin which met the ships and accompanied them thru the pass, diving and plunging around their keels. Parliament passed an act to

protect him, but "Pelorous Jack" has disappeared. A whaling steamer operated in the vicinity of the pass a few years ago and the dolphin never was seen again. There were many strange stories told of him; the Maoris declared that he was not less than two hundred and seventy-five years old.

But the things to be seen in New Zealand are not all inanimate. Just before I left the United States I asked a friend of mine, Mr. A. O. Kuehmsted, president of a Wisconsin fishing club, what he knew about New Zealand. He replied that all he knew about it was that his club had sent out to the Acclimatization Society of New Zealand young trout with which to stock the streams of the country.

When I arrived in New Zealand I found that the trout had been received and that they had grown to several times the size they attain in their native waters. I can account for this only by the fact that there seldom are very severe or long winters and that food for the fish in the streams is very plentiful.

The lakes are teeming with salmon trout, rainbow trout and perch, and many big catches are taken during the season. Fishing generally is under the control of the Dominion Department of Internal Affairs, but most of the details, especially stocking the streams, is in the hands of the acclimatization societies in various sections of the country. These societies also bring in game and birds, and New Zealand is becoming a sportsman's paradise. The government co-operates by means of protective laws as well as practical assistance. A few years ago they built a fish hatchery, where much of the experimental work and study of both native and imported fish is done, with a view to keeping the streams well supplied with food fish.

One of the finest places in the North Island from an angler's point of view is picturesque Lake Taupo. Here hundreds of sportsmen gather each year. It is only a short distance from the Rotorua hot springs district, so that visitors to the springs usually include the lake in their trip. The lakes in the South Island likewise are great attractions for fishermen. It is not uncommon for trout weighing from six to



This is The Hermitage, on the slopes of Mount Cook, New Zealand's highest mountain. The Hermitage is the starting place for those who attempt to climb this snow-bound peak. During thirty-five years only sixteen parties have scaled the icy cliffs to the top of one of the three summits. So clear are the waters of the lake that it is difficult to tell in a picture which is the building and which the reflection.

fifteen or even twenty pounds to be caught in these lakes, and occasionally one weighing forty pounds is taken.

While fish are plentiful, the authorities have to contend with that parasite, the poacher, who does not hesitate to take the fish, altho he has contributed nothing toward acclimatizing them. There are several kinds of poachers. The "tickler" is least hurtful to the sport, because when he takes a fish from the stream or lake he does not injure the other fish. His way of operating is simple. Having located a nice trout close to the water's edge, the tickler slips his hand into the water and gradually works it along beneath the fish toward the head. Suddenly he sticks his thumb and first finger into the gills and throws the fish ashore. There must be

They catch them this size in Lake Taup

plenty of fish when you can catch them this way. The seiner, called a "netter," in New Zealand, is also a law-breaker.

The most hated of all poachers, however, is the dynamiter. He uses plugs of gelignite, throwing them into pools where big numbers of fish are congregated. The explosion frequently kills and mangles a great number of fish and the dynamiter gets only a few good ones. This kind of poacher, when caught, is severely dealt with by law.

There is a fairly wide range of feathered game in New Zealand, but the only kind that can truthfully be said to have been there always is the wild pigeon. While in South America I tried to locate the wild pigeon, now extinct in the United States and Canada, altho not so many years ago they fre-



The rapidly flowing rivers of New Zealand offer the fisherman ideal sport.

quently obscured the sun in their flight across the sky. I found none in South America, nor any other place until I came to New Zealand. This is not, however, the same bird we knew in the United States.

Wild pigeons were once found in New Zealand by the millions and grew to weigh more than two pounds. The natives used to net them by thousands and fry them down in their own fat ; thus prepared they would keep for a long time. They also caught them by building smudge fires under the trees where they were roosting, gathering them up when they dropped to the ground, half smothered. The New Zealand wild pigeon has a beautiful white breast and green-blue feathers from the neck and head along the back to the tail and top of the wings. The birds are most plentiful in the heavy bush districts and rarely to be seen in populated centers. They feed on wild berries, principally, the mirau, a reddish berry about the size of a wild cherry, being the favorite. The mirau tree is of the pine species and carries a fairly heavy foliage. The wild pigeon is now protected by an act of parliament, and

in order that it shall not become extinct, the shooting season for it is limited to three months every alternate year, beginning May first.

In connection with sheep-raising in Otago Province I learned the story of a bird, the kea parrot, which in the last quarter of a century has undergone a most extraordinary change in its habits. Originally the kea was just one of a family of parrots that ate insects, honey and wild fruits. But with the multiplying of sheep the kea turned into a blood-thirsty sheep-killer, whose depredations ravaged flocks far and wide. Today, these birds are eagerly hunted for the bounty placed on them. How the kea became a killer is not definitely known, but it is believed to have acquired the taste for meat during one of the seasons when sheep were so plentiful that they were killed for their hides, which were stretched upon the fences to dry. From pecking at the bits of fat which clung to these hides the kea became bolder and attacked live sheep. Their favorite food is the fat surrounding the kidneys, and they land upon the back of an animal and with their sharp beaks peck thru the hide into the kidneys. Few animals survive such an attack.

To me the most interesting thing in the museum I visited was the replica of a moa, the largest bird ever



This is the kea parrot, innocent-looking enough, but a formidable enemy of the sheep industry. Because of its sheep-killing habits the government pays a bounty for each kea parrot that is killed.

known to man, which became extinct hundreds of years ago, probably soon after the Maoris first came to the country. Some scientists hold to the theory that the moa was gone before the Maoris landed, but the fact that bones of the giant bird have been found in caves along with cooking utensils and other articles, indicates that the Maori wiped out the moa by killing them to obtain feathers for decorating purposes.

There were several species of moa, ranging from the size of a turkey to a dozen feet in height, with leg bones like those of an elephant. The moa looked like an ostrich or an emu, but had no wings, and stood up very straight when in motion, presenting an awe-inspiring sight. Feathers of the moa have been found in quantities in both the North and South Islands of New Zealand, and are more like the feathers of the emu than any other bird. Apparently the birds thrived in the South Island long after they had disappeared from the North Island — another bit of evidence in support of the theory that the Maoris killed off the moa, for the Maoris have always lived mostly in the North Island.

The native quail, a plump little gray



The prehistoric moa, the largest bird ever known to

bird, the swamp hen, or "pukaki," to give it the native title, the black swan and the gray duck complete the list of native feathered game, but they are only a small part of the game birds which have been acclimatized here for sporting purposes. So far as water birds are concerned, there are teal ducks, paradise ducks, blue mountain ducks and three or four varieties of geese, including the Canadian and cafe geese. Then there are certain breeds of wild turkeys that are holding their own.

Probably the most graceful of all New Zealand birds is the lordly pheasant with his gay plumage, by comparison with which his mate, the pheasant hen, pales into insignificance. The pheasant is confined chiefly to the North Island, this

doubtless being due to the fact that it is warmer there. They are fairly numerous and may be found close to farmhouses, but thrive best where they are least disturbed. During the shooting season many fine bags of these birds are obtained and they are considered a great delicacy.

The California quail has made great progress in New Zealand; it is distinguished from the native



A moa skeleton towering above the skeleton of a man.

quail by a top-knot. They are prolific breeders and as a result quail shooting has become a popular sport in New Zealand.

Deer are to be found by the thousands. These animals are of course importations, because the Maoris found no four-footed game when they came to the islands. In the deer-stalking season people come from England, the Continent and Australia for the sport. Of course the extent of a stalker's sport usually is indicated by the number of heads. The more "points" on the head, the better. A story is related of an ardent deer stalker who right thru the season obtained as many deer as any one of his party, but because he did not succeed in getting a head out of the ordinary, considered that he had had a bad season. The next season he stalked only



Duck shooting is a popular sport in season, and the New Zealand hunter who has no luck cannot blame it on either absence of birds or a lack of variety.

one good stag and incidentally did not do much killing, but because the stag had such an excellent head he said, "It's the best season's sport that I have had for years."

Wild boar hunting is the most exciting of the big game hunting in New Zealand. When the dogs locate a herd of wild boars there is a stampede of the sows and their young, but not so the boar. He faces the dogs and hunters with unsheathed tusks, foaming at the mouth with rage. The dogs attack and he stands them off until an opportunity affords, then takes toll in the twinkling of an eye. Thoroly aroused, he charges the dogs. If by chance a bullet strikes him, then some one has to hunt cover. A wounded and infuriated boar has been known to hold up hunters for hours. The hunter generally takes to a tree in case of emergency and there remains until it is the pleasure of the boar to let him come down.

Wild pork is very sweet. The pigs fatten on the hinau berry, which grows wild, and the meat is said to be superior to the tame pig. Wild boars learn tricks quickly when captured young and make great pets. The wild pig is not native to New Zealand, but was brought by Captain James Cook, who gave several pigs to the Maoris with the injunction not to kill any of them until they had had time to increase in numbers. The wild pig of today is a descendant of the tame pigs which escaped into the bush many years ago.

Wild cattle hunting was a popular pastime in New Zealand, but with the clearing of large areas of ground from its native bush the wild cattle worked farther and farther back until now they can be found only in the back country, and to get good sport hunting them it sometimes is necessary to travel great distances. In the old Maori King country—the center of the North Island—even now large herds roam the bush.

The wild bull, like the wild boar, is not afraid of men, and if one is attacked he will stand his ground and fight. No fence will hold these wild cattle. Settlers frequently have rounded them up when they came out of the bush in the spring of the year and put them in paddocks, but at the least sight of what



New Zealand furnishes wonderful sport for the deer hunter, altho deer are not native to the country, but were imported. The real sportsman does not go in for numbers as much as he does for "points" on the deer head. The hunters in the picture appear to be pretty well satisfied with their kill.

appears to them a menace they clear the fences and make for their retreats in the bush. In the "back of beyond" country the bushmen draw upon the wild cattle for their meat supplies and about their camp fires at night these men have many tales of hazardous adventure to tell.

In some parts of New Zealand hare hunting has taken the place of the famous fox hunt that is so well liked by the British but has never been introduced into New Zealand. These hunts take place during the winter and as the hunters are all mounted it makes an exhilarating sport. Also drives on foot are common. Large bodies of men with dogs and guns spread out in long lines, then drive the hares into a corner where they are bagged. The King country of North Island is the scene of wild-horse hunting, which can be indulged in only on the plains. As was done in the old Western country of the United States, the animals are driven into stockades, where they are captured and broken. It is splendid sport and but little danger is attached, save when a horse stumbles and throws his rider.

Very little so-called big game is found south of the equator, except in Africa, of course. South America has none, and that in New Zealand has been brought in within the last two hundred years.

Horse racing is perhaps the most popular of all sports in the Dominion. It is government-controlled, betting is allowed only under the supervision of officials, and both the bookmaker and the man or woman who bets with a bookmaker are severely punished. You hear very little talk of fixed races or crooked jockeys in New Zealand, for, while gambling on races is permitted on the government-operated machines, the gambler never has succeeded in getting his clutches on the game as he has elsewhere.

The totalisator, or "tote" as the betting machines are called, pay back to the bettors all money which is wagered with the exception of ten per cent, of which the racing club which is staging the meeting gets seven and one-half per cent and the government two and one-half per cent. Investments must

be made in person and no one under twenty-one is permitted to lay a wager. No investment can be accepted by telephone or telegram. Publication of the odds on races at any place outside of the race course itself is prohibited, thus preventing gambling except by those actually present at the races.

I was fortunate enough to be present at a meeting in Wellington, the capital of New Zealand, and I found the customs as they differ from those in the United States most interesting. Races are set to be run at a precise minute, and, unless a fractious horse muddles the start, the barrier goes up at the time ordered. For at least thirty minutes before the race starts the horses are on exhibition, first in the paddock, then on the track itself, in order that the spectators may familiarize themselves with the horses.

As soon as a spectator is satisfied he makes his way to the



This is a photograph of the totalisator scoreboard. Under each slot is the number of the horse, and the figures in the windows indicate the amount "invested," or bet on the horse. The window at the top, near the roof, shows the total amount put up on the race, while at the left is a board showing the dividends which the winners pay. The "tote," as it is called, is the invention of a New Zealander.



This is the finish of one of the races for the Wellington Cup, always the big race of the year. The judges are stationed on the outside of the track and sight across to the finish mark, a heavy black line on a white board.

totalisator machine, joins one of the lines leading up to the investment windows, and when his turn comes buys from one of the girls at the windows as many tickets as he wishes. The price of each ticket is fixed. The lowest investment is ten shillings, or about \$2.50. Other tickets are sold at twice that amount, and, where desired, tickets for 100 shillings or about \$25, may be obtained. On one day of the Wellington races \$600,000 passed thru the two totalisators, the total for the three days meet being \$1,150,000.

In New Zealand the pay-off is made differently from that in other countries, where wagering is made on a horse to win, to place and to show—in other words, to run first, second or third. The totalisator pays only on the horses which run first and second. In making your investment you merely give the number of the horse upon which you wish to wager and the ticket you buy is stamped with that number. Two-thirds of the money invested on each race, less the ten per cent deducted for the government and the club, is paid those who wagered on the winner and the other third divided among the backers

of the horse which came second, provided there were five horses in the race. It amused me exceedingly to watch the lucky investors dashing off for the pay-off windows. Grandmothers gathered their skirts up and scuttled across the lawn in competition with their younger sisters, and men, old and young, ran foot races.

The city where a race meeting is scheduled is the Mecca for thousands from all points of the islands. Hotel reservations must be made far in advance, and during the three or four days that the races last it is extremely hard to get any business transacted. Four of us slept in one room at Wellington. So great is the demand for transportation that the government-operated railway has been known to disrupt regular train schedules in order that the race-goers' specials might have the right-of-way.

It is hard to say what other sport ranks next in favor with the New Zealanders. Bowling on the green, tennis, golf, cricket, Rugby football all have their adherents, their representative teams for competition with other nations, and swimming has a strong hold on the people generally.

Bowling on the green is an ancient and time-honored game in England and her possessions, but it is far too sedate and deliberate a game for the average American. Bowling requires a high degree of skill and in the hands of a master the balls will do wonderful things. Public bowling greens in the parks are as common here as corner-lot baseball diamonds are in the United States. I was told there are 30,000 registered bowlers in the Dominion.

The greens are wonderfully smooth, velvety things of grass. I asked an ardent bowler in England how much work was required to make an ideal green. "It is very simple," he replied. "You prepare the ground and sow the seed. When the grass comes up you water, clip and roll it, and sow more seed, and you water and take care of it, and in about three hundred years or so you will have a green that will pass."

Cricket probably ranks next in popularity in New Zealand. If anything it requires more skill in pitching the ball or in

batting it than baseball, but the contests often extend over several days when a star batter is "in." New Zealand has produced some great cricketers, and in the matches with Australia and England each year they have acquitted themselves with credit. Cricket never has obtained much of a hold on any nation except the British, any more than baseball has succeeded in interesting any country other than America to any great extent.

Tennis in New Zealand was given a great impetus this year by the battle for the famous Davis cup between Americans and Australians. It was the first time that such an event had been held in New Zealand. Everybody plays tennis—men and women, young and old—and the various tournaments bring together the class of the players from all over the island. You seldom see a party traveling without a handful of rackets among them.

Golf is gradually forging to the fore all over New Zealand. Golf courses are scattered over both islands and some of them are said to rank high as good courses over which to play. The nature of the land, which most everywhere is hilly, has resulted in rugged courses which tax endurance and skill. The people like the game tremendously and it is one of their standby sports.

Yachting is another popular sport. The Dominion has many splendid harbors and Auckland is said to have more small yachts for its size than any other city in the world.

Swimming ranks high as a major sport, being indulged in by practically every New Zealander. Many wonderful swimmers have been developed, and the big meets attract swimmers from all over the world.

Rugby football is the great game of the young fellows in New Zealand, as it always is in all parts of the British empire. Teams that play a sterling game of Rugby are to be found in all parts of the Dominion and the inter-provincial contests are a magnet for thousands. Many persons in the United States will remember the famous team of New Zealanders who



The kēi bird, found in the North Island, is said to locate the worms on which it feeds, by listening for them.

toured the world, meeting and defeating the best football teams.

Rowing fans will remember Richard Arnst, champion sculler, whose record never has been duplicated. He once was a long-distance bicycle rider who became an oarsman by accident. Dr. Henry T. J. Thacker, the mayor of Christchurch and himself a prominent athlete in his young days, took a liking to Arnst and offered to back him if he would try sculling. The bicycle rider accepted and rapidly climbed to the top in rowing circles, winning the championship from the famous Webb.

No story of sports in New Zealand would be complete without a mention of the athletic prowess of the Maoris, who, even in the early days of New Zealand, took to sports as did our American Indians. Not even today, with the government-regulated racing, are better contests produced than were to be seen at the old-time Maori "oats" meetings. The stakes for which the horses ran were sacks of oats. The owner of a horse lucky enough to win more than one race a day often had to send for a wagon to haul his winnings away. There is the story of one owner whose winnings for the day were

so heavy that the Maoris ran out of oats and had to add two live pigs to the load of grain to balance the account.

Until recent years it was in water sports that the Maoris excelled, because the race always has had a fondness for the water and produced splendid sailors. It is a matter of much regret to the old residents that no longer do the Maoris stage the canoe races which once were big features of every regatta.

A Maori always excels in any game where quickness of hand and eye counts. Handed down among them for generations is a game calculated to develop this quickness. It consists of two players, facing each other, starting at a given signal and making all kinds of weird and complicated movements with their hands. The player who first induces his opponent to fall in the error of making the same movement as he, is the winner. It is said that the reason the Maori has taken on civilization so readily is because he is such a good sport, and likes the very things the British do so well.

The Sports Protection League, with headquarters at Wellington and with fifty branch offices scattered thruout the Dominion, is a most powerful factor in keeping all sports clean and in encouraging them.



Tuatera, or New Zealand lizard, which is unlike all other lizards and the only known representative of the Rhynchocephala order now extant. With the exception of the Tuatera this order of reptiles is found only as fossils.

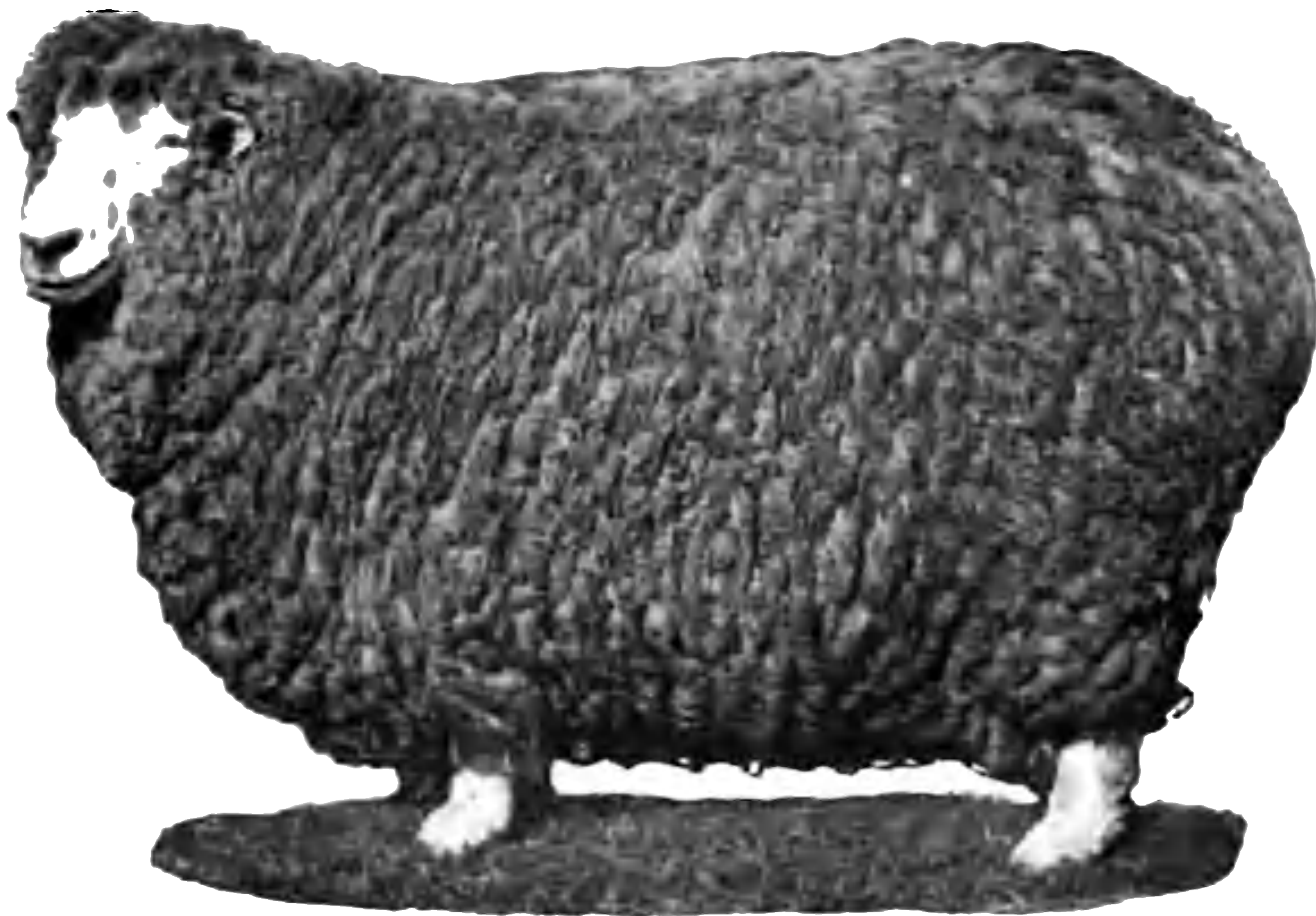


Fruit growing increases from year to year. The picture shows "just a corner" of an orchard in Otago Province, near Dunedin.

CHAPTER III

AGRICULTURE IN NEW ZEALAND

IN THE early days of the American West the man who raised sheep was an outcast, to be persecuted and run out of the country with such of his flocks as might survive the attacks of the cattlemen. Today, in New Zealand, which still is a young country, another story is being written, and the humble sheep comes close to being the king of animals. When you mention farming to a New Zealander his mind at once turns to sheep, and while you may be able to talk to him of tilling the soil and growing grains and fruits and vegetables,



Sheep may be said to form the foundation for New Zealand prosperity. This is a picture of prize-winning New Zealand wool "on the hoof." With the advent of the freezing plants the exportation of mutton enlarged the sheepman's opportunities and greatly stimulated interest in sheep-raising. The merino, so popular in the drier districts of Australia, make up less than five per cent of the New Zealand flocks.

it is only a question of minutes before he has drifted back to sheep again.

New Zealand is a great farming and stock-raising country because its range of temperature is slight. In summer it never gets hot enough to burn up the grazing lands, and its winters are never so cold that stock has to be housed. Water is plentiful and there are thousands upon thousands of acres of virgin land eminently suitable for the raising of sheep.

It is in the North Island that the best sheep and cattle lands are to be found, altho the sheep on the 3,000,000 acres of Canterbury plains of the South Island set the high standard of exported mutton for which New Zealand is famous, and the dairy products of Banks Peninsula grade with the best. Canterbury, too, is where in the winter months sheep are brought from other districts for fattening on the forage and root crops which are raised there.

Farming in New Zealand was revolutionized by the discovery, in 1881, that sheep killed and frozen there could be safely shipped as far as England and there sold for fancy prices. Until that time the land was held in large blocks and the sheep grazed on wild grasses, chiefly for their wool and tallow. With the advent of freezing works and refrigerator ships it became profitable to raise sheep for the meat. Now, instead of letting sheep and lambs root out a living on the native growths, the sheepman grows special crops for fodder to fatten the greatest number of lambs for export at from four to eight months.

Cultivation and manuring of the lands where root and forage crops are grown in rotation with grain crops has done much to increase the carrying capacity of the soil. The climate is so favorable that even in the exposed mountainous country the increase by lambing runs as high as 75 per cent, while in farm flocks increases as high as 125 to 140 per cent are not uncommon.

From the wool, too, the sheep-raiser gets a good profit, altho the wool is not of the highest grade. Merino sheep, that do better in a dry climate, make up less than 5 per cent of the



Fat lambs held in pens at one of the forty-odd freezing works in the Dominion. When the lamb is dressed the average carcass weighs about thirty-six pounds, while carcasses of sheep average around sixty pounds. These are choice lambs to be killed for export, for the government permits only the best to be shipped abroad, thereby protecting the reputation of New Zealand lamb and mutton in the foreign market.

flocks. Southdown and Shropshire breeds are to be found everywhere, but in the South Island the English and Border Leicesters are favored, while in the North Island, which is more rugged and exposed, the Romney Marsh and Lincoln breeds are most liked. There is a tendency now, however, to specialize on the Romney, which seems to give best results. Importation of high-grade rams and ewes is constant, the same result following the introduction of sheep as follows the bringing in of other animals or birds or fish—they grow better and larger than they do in their native homes.

A great many of the larger sheep-raisers export the meat themselves to the London market, tho most of the fat sheep and lambs are sold to exporters. The forty-odd freezing com-



One interesting spectacle in New Zealand is the itinerant wool buyer, who drives several yokes of oxen hitched to a heavy wagon, and goes from farm to farm until he has the wagon loaded. He then takes his load to the nearest town and ships it to a mill or warehouse. Such an outfit as this is frequently seen in the "back blocks."

panies under strict government control will undertake to handle the sheep for owners from the time they are received at the freezing plants until the carcasses are sold on the London market, and they charge only a fair rate for their services. Private agents will do the same thing, paying the freezing companies for killing and freezing, and the steamship company for carrying the meat.

All killing is done under the supervision of the government, which also grades the carcasses according to weight and quality. Government men follow the meat thru until it is in the hands of the retailer. So closely is the grading done that it is not unusual for large orders being given by cable for shipments extending over a period of months.

The average slaughter of lambs in New Zealand is around 3,000,000 a year, of an average weight, dressed, of thirty-six pounds. More than this number of sheep, averaging sixty pounds, dressed, are exported annually. In the last ten years 36,000,000 sheep and an equal number of lambs have been slaughtered in the Dominion for food purposes. For their own food the farmers kill an average of 600,000 sheep and 60,000

lambs a year. Government figures indicate that each person in New Zealand eats 120 pounds of mutton and lamb a year. I ate mutton or lamb once a day for the forty days of my stay there and did not tire of it.

The grasses of New Zealand upon which the sheep are fed are sweet grasses, as the country is hilly and rolling. So there is no sour grass of the swamplands or weeds of the plain, which, in my judgment, accounts for the delicate flavor of the meat of the sheep, and for the reputation it has won in the markets of the world.

New Zealand, in spite of its size, ranks ninth among the sheep-raising nations of the world. The value of the wool exported is more than a third of the total exports of the Dominion. The home mills also take a considerable amount of the wool, half-bred fleece being preferred.

The experience of the American sheep-raiser has been that sheep are very hard on land, as the sheep eat down to the roots, and when grazing is poor they even eat the roots. Most of the sheep ranges of the United States, however, are on dry and poor land, where the pasturage burns out or dries up. In New Zealand sheep are never put up in winter, and the fifty inches of rainfall furnish abundant forage at all times. The



In the more level country, where the roads are good, the ox team is replaced by the tractor as a means of getting wool to town for shipment.



Motor cars have by no means replaced the horse in New Zealand. Canterbury Province, in which this picture was taken, is noted for its fine horses, which range from trotters and runners to heavy draft horses. American racing stock is popular with the breeders, but they go to Europe for the heavy work stock.

usual system is to change the flocks from one fenced range to another so that the grass will not be eaten too closely. The fact that 16,000,000 acres, or more than a third of the whole country, which had been opened up and planted to crop once, have been turned back to sheep and cattle, proves that the "woolies" pay better than grain.

To one fresh from the United States the first thing after

sheep that attracts attention is horses. In the rugged country, which is found almost everywhere in New Zealand, the horse has not as yet succumbed to the motor. And such horses! None of the under-sized, poorly conditioned animals with which so many of our American farmers are content to work, but great, broad-hipped Clydesdales and Shires, in whose veins



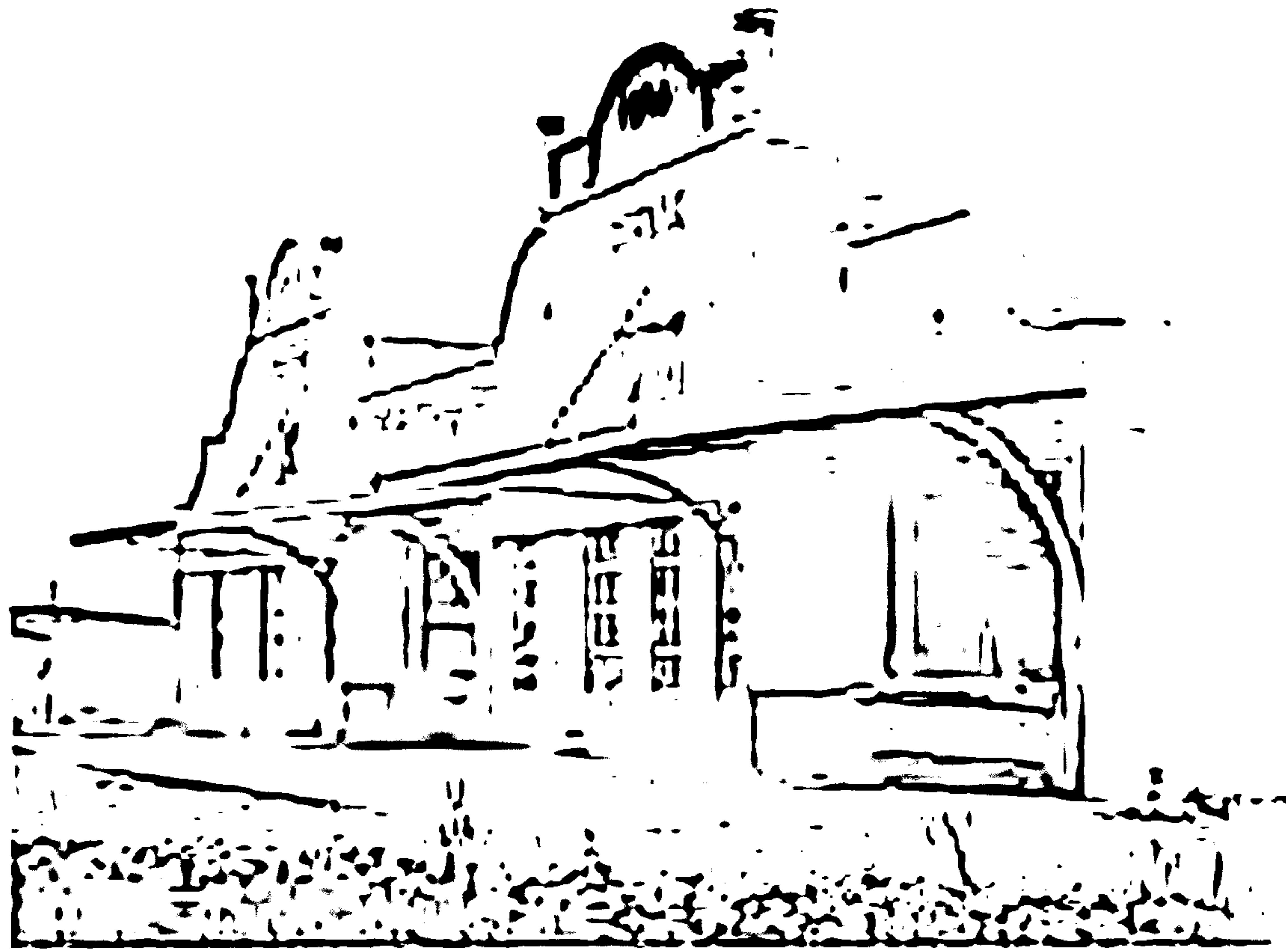
Weighing in milk at one of the many co-operative butter and cheese factories.

runs the blood of the best work stock of other lands. The New Zealander loves horses and only the best will satisfy him.

Next to sheep-raising, dairying is the great farm industry of the country. The government figures show almost 900,000 dairy cows scattered throughout the North and South Islands. There are fully 27,000,000

acres in the Dominion which are purely pastoral—hills and slopes where grain cannot be sown but which afford succulent grazing.

Dairy produce is of course one of the big factors in New Zealand commerce, and every aid and encouragement is given by the government. Advances are made by the state to dairy companies for the purpose of buying land, erecting buildings



The receiving platform at a co-operative cheese factory. Some of these factories run the entire year. Usually, however, they operate only nine months. Generally, five men constitute a working force.



A typical dairy products factory in New Zealand, owned on the co-operative plan. Farmers who own shares are paid for milk on the basis of the butter fat it contains, and get back the skimmed milk. The profits of the factory are divided among shareholders on the basis of the amount of milk they have furnished.



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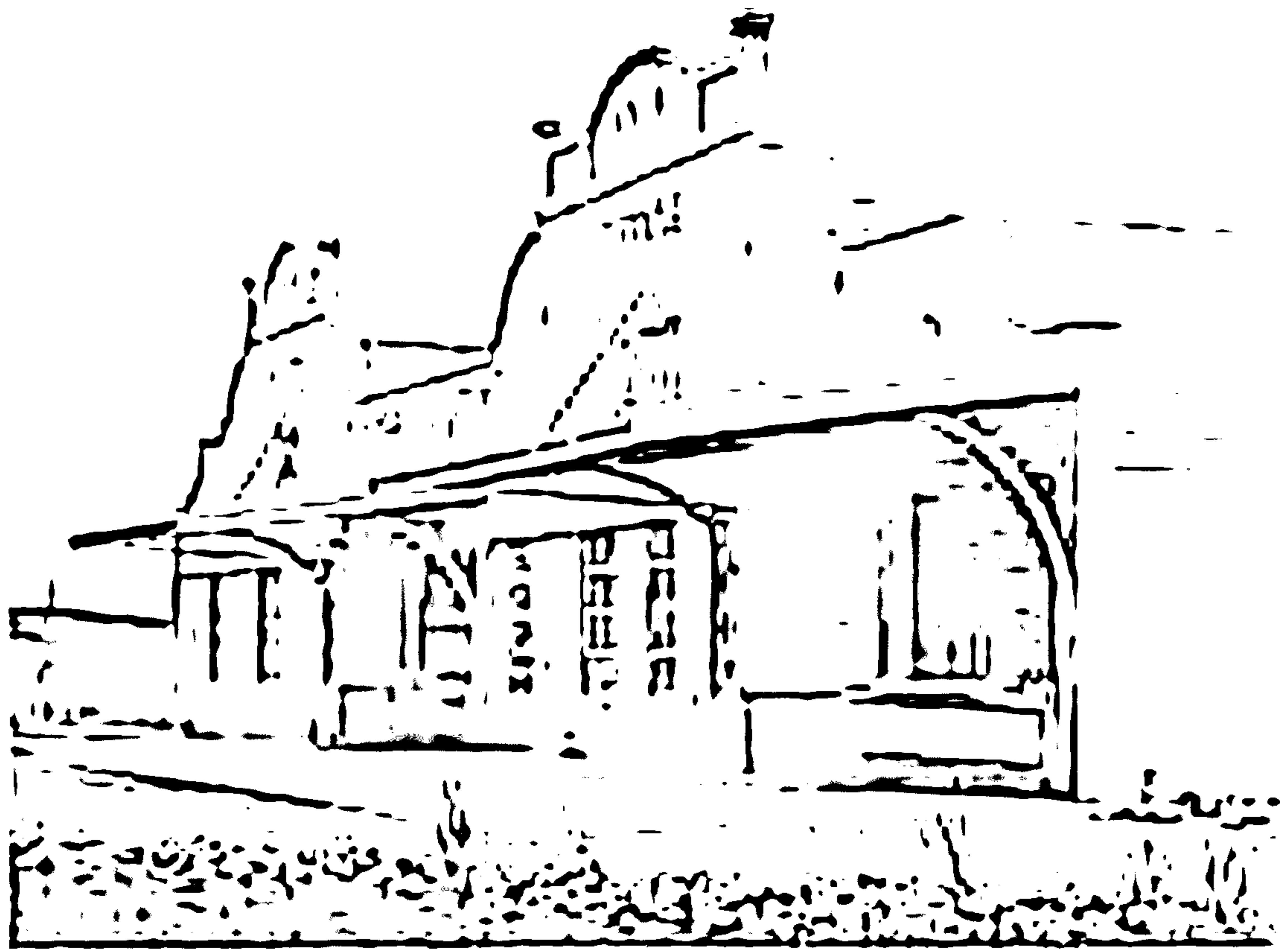
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and buying machinery. Five per cent interest is charged on the money advanced and the debts must be repaid within fifteen years.

Co-operative butter and cheese factories are numerous. The milk producers are paid for their milk according to the butter fat which it contains, and after the expenses of the factory have been paid the net profits are divided among those who own the co-operative factory. The butter and cheese produced are either sold for the season at a fixed price, or else consigned to a foreign market—usually London—under an agreement guaranteeing a minimum price.

Government grading of dairy produce is free, and so carefully is this done that the Dominion inspector's stamp is accepted wherever the produce is sold, the certificates being taken as final so far as quality and weight are concerned. No dairy or meat products can be exported from New Zealand without the government stamp.

While some of the factories close down for three months each year, many of them, particularly in the better dairy districts, run the year round. Most of them are equipped so that they can make either butter or cheese as the season or the market dictates. The 214 butter factories and 400 cheese factories annually prepare for export 20,000 tons of butter and 60,000 tons of cheese, in addition to the generous quantities reserved for home consumption.

Comparatively few cattle are raised for beef, altho there are still some fine herds of the Shorthorn, Aberdeen-Angus and Hereford breeds. The favorite breeds, however, are the dairy stock, Jerseys, Holsteins, Ayreshires and milking shorthorns. Very few hogs are raised, and these only for local use.

I asked an official of the New Zealand Department of Agriculture, "Why don't you raise more wheat and oats, and why has the acreage sown to these crops been smaller in the last two years than in the past?"

"Sheep, principally," he answered with a smile. "Our rainfall is so plentiful, and grass and forage crops grow so rapidly and heavily that the farmer finds sheep pay him better than



Dairy cattle are increasing in New Zealand, and many fine herds are seen in the mixed farming districts. This picture of a Friesian dairy herd was taken on the Weraroa state farm.

cereals and are less work. There is another reason, too. Fertilizer is so high—three times as high as it was before the war, and the farmer will not pay the price. Most of our land requires fertilizer to make it produce its best small grain crops. So, while the government tries to encourage the raising of wheat by guaranteeing a minimum price and fixing the maximum price at which Australian wheat can be laid down in New Zealand, the lure of sheep-raising is too strong.”

That is why New Zealand raises wheat and oats only for



The Farmers Institute Building, in Wellington, is a large new office structure, owned exclusively by farmers. In the basement are showers, smoking-rooms and restaurant. On the top floor are bedrooms for members. Also, there is an auditorium for farm organization meetings.

her own use and depends upon sheep and dairy produce for the bulk of her exports. Ninety per cent of the wheat grown is on the South Island, most of it on the fertile plains of Canterbury and South Otago. Little corn is raised, and practically all of that is grown in the northeastern district of North Island.

The South Island leads in the production of barley and peas for export. A great deal of flax is grown all over the Dominion for export, most of it coming to America to be used for rope and twine.

Of the total area of 43,500,000 acres occupied in New

Zealand, 16,000,000 acres were in pasture on land that had been seeded. The figures for last year show that grain and pulse crops were sown on 700,000 acres, that grass for seed and hay was being grown on 900,000 acres, that 25,000 acres were given over to orchards, while 25,500,000 acres were wild lands and consisted largely of sheep and cattle ranges. The rest of the land under occupation was given over largely to small gardens and private grounds. The average yield throughout the Dominion is thirty-two bushels of wheat. In Canterbury plains, where the yield is exceptional, it runs as high as ninety bushels to the acre.

In the North Island there are a great many thousand acres of volcanic, or pumice lands, where the government is making a strong effort to treat the land so that it will become productive. The discovery was made that near the edges of small streams and lakes, where livestock had rolled and pawed up the earth, a rich crop of grass has sprung up. The government authorities believe that plowing, harrowing and rolling



Harvesting wheat in New Zealand. Wheat and oats are grown only for domestic consumption, and approximately ninety per cent of the wheat is raised in Canterbury and South Otago.



A New Zealand farmerette piloting an ox team at flax-gathering time. In the background are bundles of flax piled up ready for stripping.

this ground ultimately will result in making it suitable for crops.

There are four large experimental farms located in different parts of the Dominion, where experiments are conducted for the benefit of the neighborhood. One department consists of classes for the farmers, at which they are shown the methods employed and the results achieved. At these farms, in addition to general farming, work is constantly going on in hog-raising, dairy produce, bee culture and poultry keeping, plant and seed selection and orcharding.

In addition to the government farms, two farm organizations have model farms where the best dairying methods are demonstrated. These two farms are financed and managed by the farmers themselves, a member of the Department of Agriculture being chairman of the committee in charge. The government has arranged small subsidies extending over seven

years to insure the financial success of the venture. Field instructors are kept out virtually the whole year, and biologists and other scientists are sent out to study plant and animal diseases. In the laboratories at Wellington thousands of seed samples are tested each year for the farmers, and constant examination is being made of fertilizers.

The government authorities are anxious for the early settlement of the unoccupied land, for New Zealand's success depends largely upon its agriculture. In view of this they have a plan by which one can purchase or lease on long time large farms and by roughing it for a few years can obtain a comfortable home.

There are three methods whereby government lands may be acquired. One is by outright purchase, another by lease



New Zealand has a so-called flax, really a species of lily, which is one of the big items of export to the United States, where it is used for the making of twine. This flax is native to the country, and for hundreds of years the Maoris have used it to make their clothes and blankets. After being cut the flax is sun-dried in the field and then hauled to a breaking machine.



Baled flax for export being loaded on ship.

with the right to purchase, and the third by plain lease, with no option. To rent land with a view to buying it later the tenant pays a rental equal to five per cent of the sale price of the land. On the land which is leased without purchase option the rent is four per cent of the sale price.

Land is divided into three classes. For the first class lands the sale price is not less than \$5.00 an acre, for the second class, not less than \$2.50 an acre, and for the third class, not less than \$1.25 an acre. These are the minimum prices on the poorest land. The holdings are limited to 666 acres of the first class, 2,000 acres of the second class and 5,000 of the third class. The man who leases land with a view to buying has twenty-five years in which to pay off the debt. Leases without option run for sixty-six years, with the privilege of renewal. There are modifications of these terms for those who want to settle on the land for shorter periods. When the land

is bought outright certain improvements must be made, as is the case with leased lands, and residence on the land is compulsory for two years on most crown lands.

The government still owns 4,500,000 acres, of which 700,000 acres is open for settlement. Most of that which is not open consists of rugged, mountainous land which is suitable only for pastoral purposes. The holdings of the government vary from year to year as more and more Maoris dispose of their land. About 150,000 acres are disposed of each year, either sold or leased.

Of recent years land legislation has tended more and more to prevent speculators from obtaining large blocks of agricultural land and using it for pastoral purposes. The government frequently takes steps to compel big landholders to divide their tracts and permit more settlers to come in. Usually it is not difficult for the landowner to agree on a price, but if the owner is obdurate the government takes the land by condemnation. In one instance, in a district of North Island, the government decided that one man held too much land and compelled him



Splendid barns and other buildings usually are found on New Zealand farms. This is the type of warehouse in which the farmer stores his wool at shearing time, until he has time to bale it and send it to market.



Tapping a kauri tree for turpentine sin, which, when solidified, becomes uri gum. This is so injurious to the trees that the practice is forbidden on government-owned kauri lands. The trees are climbed by means of rope slings, and ropes are then dropped over limbs, ten a hundred feet from the ground. Helpers on the ground manipulate the ropes, raising or lowering the tappers as required.

fence, clear, buy stock and implements, and \$250 for his household furniture.

The tax laws of New Zealand seem specially framed to help the farmer. The tax is assessed on the unimproved value of the land, with exemptions and deductions according to the value of the holding. Where the land is mortgaged still

to sell half of it. On that half the government settled thirty-two families, while the original holder really suffered no loss in his income because he began more intensive cultivation of the half which he had left.

Since 1894 laws have been passed making it possible for the government to advance money to worthy settlers. The smallest advance made is \$125, and the largest is \$12,500. The loans must be repaid in thirty-six and a half years. To date over a hundred million dollars have been lent out to fifty thousand persons. Half of the principal has been repaid. The department makes a net profit each year of \$250,000.

The government has made it easy for returned soldiers to acquire land, and some 8,000 of them have been settled on either virgin or improved land. If the soldier prefers to buy private land which has already been improved the government will advance him \$12,500 on the purchase price, \$3,750 with which to

further exemptions are allowed. In certain cases where the landholder is in hard luck the commissioner of taxes has the power to grant even further relief than provided by the exemptions. The present system is that of a progressive land tax, the object being to break up the large holdings by making the rate higher on larger blocks than on small holdings. Absentee landlords and shareholders in land companies pay a 50 per cent higher tax than do those who live on the land.

In addition to the land tax, however, the farmer pays an income tax on earnings above \$1,500 a year. Exemptions of \$1,500 is allowed on incomes up to \$3,000; above that the exemption gradually decreases until on incomes of \$4,500 there is no deduction at all.

Along the peninsula to the north of Auckland lie the great kauri forests which have made it the timber center of the entire Dominion. In this same area is located an industry which



The best kauri gum is found ten or twelve feet below the surface of the ground, where ancient kauri forests are buried. The presence of the hidden treasure is determined by "spearing the ground." Long spearlike iron rods, such as are shown in the hands of the men in the photograph, are used to probe thru the soil and pipestone clay. Having located the gum in this manner, the diggers resort to pick and shovel. The picture shows a typical kauri gum diggers' camp.

has no rival in the world, and which makes it possible for the United States, to which most of it is exported, to lead the world in the manufacture of varnishes and linoleum. It is kauri gum industry, and the gum is found only in the 814,000 acres in northern New Zealand, where the kauri trees are thick.

Kauri gum is really not a gum at all. It is the solidified turpentine of the kauri tree and is a resin. It assimilates oil more quickly and at a lower temperature than any other known gum, and for that reason is always sought by the makers of the best varnishes. The best quality, which is transparent, is used as a substitute for amber in making pipestems and cigar-holders.

Many years ago—even before the Maoris settled the island—there must have been great forests of kauri trees, which were destroyed probably from fire by lightning. These were followed by other forests, which were in turn destroyed. So it happens today that the best gum is found ten or more feet below the surface of the ground. In some places as many as three or four layers have been discovered at varying depths.

The gum diggers, some 10,000 in number, are picturesque as they go about with their long spears, probing into the ground and later shoveling away the dirt above the spot where they have located the gum. It comes up in large chunks, altho as small a piece as a walnut is not to be scorned, because it is worth from \$300 to \$500 a ton. Annual exports are about 2,500 tons at an average price of \$360 a ton. The closer it is to the surface of the ground and the drier the ground where it is found, the more valuable it is. The light-colored gum is more valuable than the dark.

Gum also is found in the forks of living trees, but the quality is poor, and so much damage has been done to trees by careless gum gatherers that seeking gum in the trees is forbidden on public lands. Some pieces weighing as much as one hundred pounds have been found.

Until a few years ago there was no restriction or organization concerning the digging of gum. The diggers, both men and women, worked independently, digging here and there,



Those who farm on a big scale in New Zealand are thoroly modern in their methods, as this hay-stacker on a Canterbury farm proves.

taking away whatever gum they could find near the surface and moving on to another spot. Now the government has it in charge, license is granted the diggers and the government buys most of their find for export.

It is a peculiar fact that the majority of Austrians who live in New Zealand are working as gum diggers. They camp together in groups of twenty or thirty, get in the field at dawn and work until dark. They are careful and methodical about the work and stay at the same place until all the gum is obtained. I was told that it is a saying in the gum fields that it is useless to follow up an Austrian. Many of the diggers make a good living by following up the careless diggers, and where they find only the surface worked, probe with long spears, and by means of hooks bring up the deeply buried gum.

Some concern has been expressed by the authorities over the ruination of the ground by careless diggers. Rather than clear off the trees and ferns which cover the ground, they set these afire and burn off the top layer of the soil, never more than two or three inches deep, leaving exposed only white pipe clay, which has not been found of much use for growing any-

thing. Experiments in an effort to grow grass which can be pastured by sheep have met with only moderate success.

Not much attention is paid to mining. More than fifty years ago some rich placer gold mines were found, but they did not last long. Alluvial gold is now found on the west coast of the South Island and in Otago, where some dredges are making a reasonable profit on the operation. There is plenty of water for hydraulic sluicing. The chief mining industry of the Dominion is that of coal, and it is estimated that there is coal enough in sight to last New Zealand for the next hundred years. Silver, lead, copper, tin, iron and other minerals are found in limited quantities.



The Prince of Wales (standing between the two women at the center of the picture) and his official party in New Zealand. The Prince completely won the hearts of the New Zealanders and Australians by his unaffected democracy. They unanimously voted him "a good fellow."

CHAPTER IV

THE GOVERNMENT AND LABOR

IN 1840 the Maoris, thru treaty, recognized the sovereignty of the British Empire, and the flag that had been planted by Capt. James Cook in 1771 became their flag and they were taken in as full British subjects and given equal rights with the



This adaptation of the royal coat-of-arms of the British Empire generally is used by the Dominion of New Zealand.

citizens then in New Zealand. About fifteen years later New Zealand was formed into a dominion with a number of provinces, each province having a separate local government and sending members to a congress composed of an upper and a lower house, the same as we have in the United States.

New Zealand has no written constitution like the United States, but the unwritten constitution of the British

Empire applied. She had a Prime Minister, the leader of the party then in power, and a Governor General sent out by the Crown. About fifty years ago the provinces were abolished, and members of the Lower House of Parliament were elected from districts, the same as our Congress, but the Upper House was, and still is, appointed for life by the Prime Minister and his cabinet. As the Prime Minister is the leader of his party and appoints his own cabinet, thru appointment they create what would be our Senate. The body is not limited as to membership, altho it has been held down to a reasonable number thru precedent. It is composed of the big men of New Zealand, who are selected without reference to the party to which they belong. They have a vote on nearly all legislation to about the same extent as that of the House of Lords in England.

There are three parties in New Zealand—the Reform, Lib-

eral and Labor parties. As near as I can judge from the men who are leaders in the Reform party it would be more fittingly called the Conservative party, as that term more correctly represents their actions.

Ninety per cent of the people in New Zealand are of pure British blood and do their own thinking, and if the policies advocated by the government in power do not suit them they are not slow to make a change.

Cities and towns have no local policemen, and both municipal and dominion laws are enforced by less than 1,000 dominion policemen, who are under civil service and independent of pulls or politics. Each state in the United States should control the police in that state, for it would hardly be practicable for us to have a national police. Only in this way can our state and municipal laws be enforced.

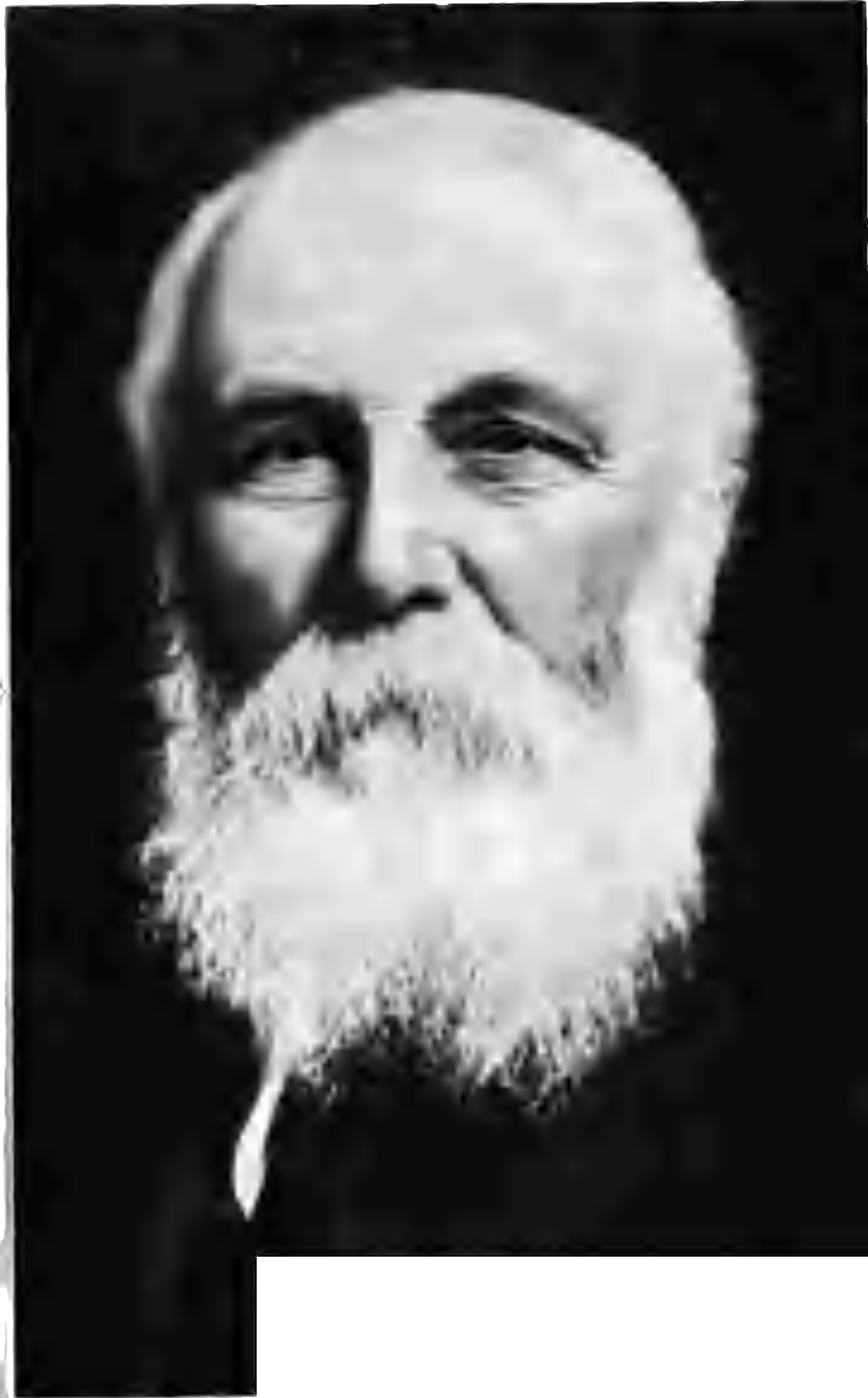
Any country is in a very bad way if the people have lost confidence in the judiciary. I was in New Zealand for quite a while and universally I heard nothing but praise for their judges, who to a man seemed above suspicion. In fact, the only complaint I ever heard was that some of them stood so straight that they leaned backward.

I learned of only one judge, Chief Justice Stout of the New Zealand Supreme Court, who paid any attention to decisions of the United States courts which were offered as references. He was referred to as the man who especially leaned toward the United States in every way. I had a most interesting visit with him and came away feeling I better understood New Zealand's aims and institutions.

Many of Judge Stout's relatives emigrated from Scotland to the United States years ago and he corresponds with them regularly. His full name is Hon. Sir Robert Stout, K. C. M. G., LL. D., and he has been Chief Justice of New Zealand since 1898. He was born in Shetland Islands, Scotland, in 1845 and has been in New Zealand since 1864, when he started in as a schoolmaster at Dunedin, where he was admitted to the bar in 1871 and elected to parliament in 1875. He became attorney general three years later, and in 1884, as leader of

his party, became Prime Minister. All his life Judge Stout has had the schools of New Zealand as his hobby. It is such men as Stout, Massey and Richard Seddon who have made New Zealand the wonderfully well-governed, well-educated and prosperous country that it is today.

When it found a drift toward Socialism among the workers of the country, the government got busy and lent these people money to build homes of their own so that they became independent and were interested in the welfare of the whole country. When it found in the natural course of events that there were left widows and orphans whose husbands and fathers had not been able to provide for the future, it established pensions of \$5.00 a week for each



Honorable Sir Robert Stout, K. C. M. LL. D., Chief Justice of New Zealand's Supreme Court, an internationally famed jurist who closely studies decisions made by courts in the United States.

widow and \$2.50 for each child under 14 years of age. When men and women grow old they receive a pension unless their income is above a certain amount. I met the editor of one of the country dailies in a town where I was surprised to find a daily paper at all, and I asked him how they could afford to get out a daily paper in a town of that size. His answer was that it didn't cost very much, as he edited the paper for a

small amount because he had his old age pension beside.

When the great World War came on and the mother country called on her colonies to send their sons to the front, New Zealand sent 102,000 out of a population of 1,200,000, or one man out of every three between the ages of 18 and 50. The number of New Zealanders who were killed or died from sickness across the sea was 17,000. New Zealand furnished the largest percentage of soldiers for her population and had the largest casualty roll in proportion of any country except France. Since the soldiers returned home New

Zealand has spent an average of \$1,000 apiece to aid them.

Before I came to New Zealand I had heard that this Dominion was handling the capital and labor question better than any other government in the world. This is no doubt



New Zealand did her "bit" in the World War. On the basis of population she sent the largest percentage of troops to the conflict, and had the largest casualty list of any country except France. The picture shows the Prince of Wales decorating a New Zealand hero.



Speaking of the Prince of Wales, he is decidedly popular in New Zealand and Australia because of his democratic demeanor. Of course, everybody wanted to photograph His Royal Highness, and he was quite accommodating about it. To two of his aides who stood between him and a camera he called out: "You chaps might as well move away. Nobody wants you in this picture." Of another photographer he asked: "Are you traveling with us show or do you belong here?" Such incidents went a long way toward making friends for the heir to the British throne.

true. It is a single-blooded country without mixed races and has the smallest percentage of colored people in the world, not counting the native Maori. As these native Maoris nearly all live from the soil and the men are inclined to be lazy, they compete very little with white labor. The immigration laws of New Zealand are so rigid that very few from India, China, Africa or Japan get into the country.

Being single-blooded white people of British stock, the New Zealanders have the same viewpoint of equity and justice, and the decisions of their courts are respected. In 1894 there

was established a court of arbitration, in which labor disputes are settled. The judge was then appointed from the Supreme Court. Now a judge is appointed who is a lawyer with large



New Zealand is very rich in potential water power. In time her hydro-electric developments will make her independent of fuel. The picture shows the power house of the Lake Coleridge hydro-electric plant and the great pipes which carry the waters down the mountain from Lake Coleridge.

business experience. Any employer of labor who wishes to have settled any demand on him for an increase in wages or desires a decision when he wishes to reduce wages, can have cited and brought into court any union that is registered in the Dominion. And the employe likewise can have his employer brought into court.

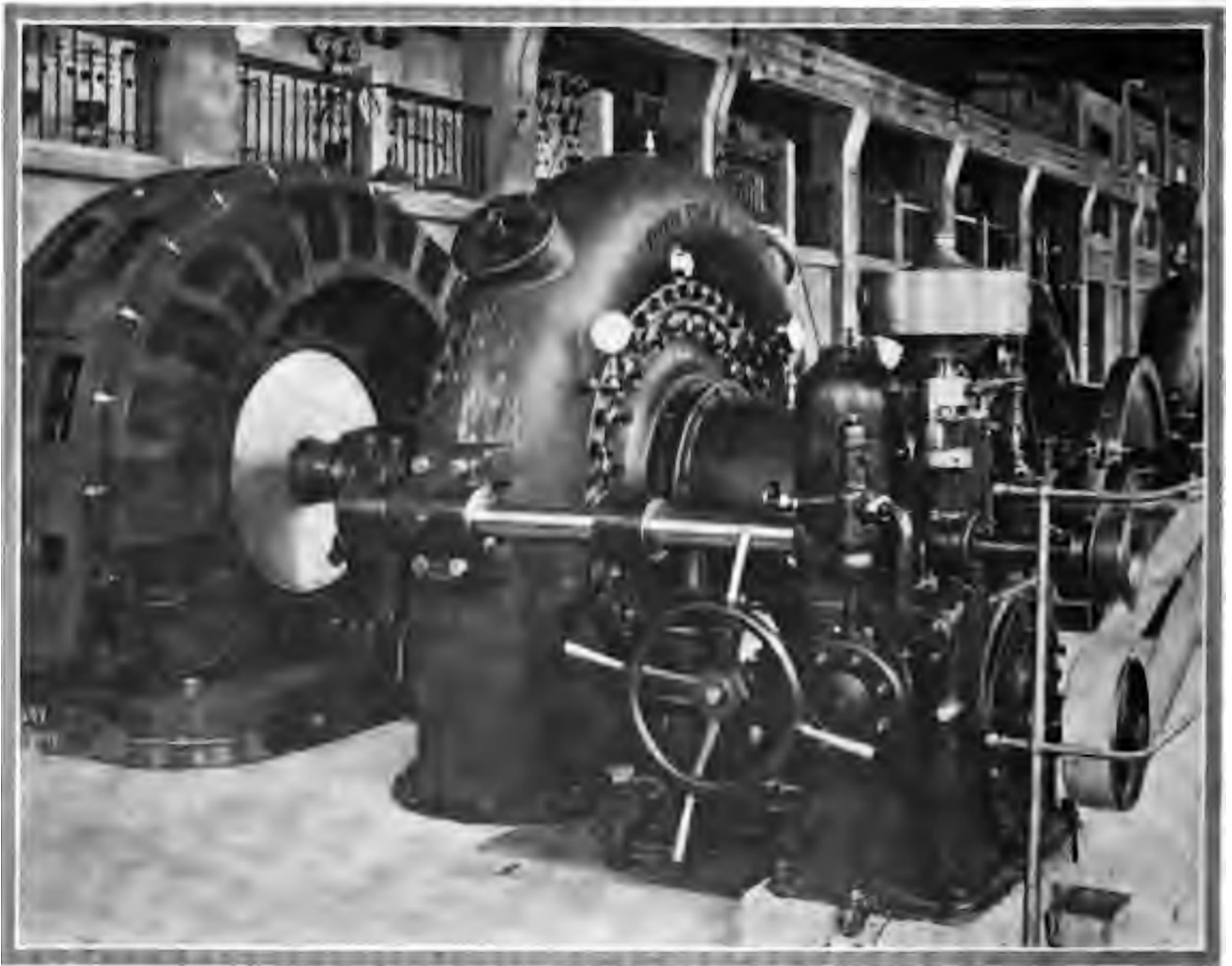
The judge of the Court of Arbitration has sitting with him a man who is selected to represent the employer and one who is selected to represent labor. The finding of any two is binding without appeal. If a union refuses to accept a decision of the court its legal charter is taken away. If an employer, either a corporation or an individual, refuses to accept a decision of the court, he is fined. The labor unions can force employers into court, but a union cannot be forced into court unless it is registered for that purpose.

For the last twenty-five years the civilized world has been in a cycle of advancing wages. The majority of decisions handed down by the New Zealand arbitration court have been favorable to labor. Naturally, such decisions would tend to inspire labor with enthusiasm for this system. The industrial world now is in a cycle of declining prices and this economic reaction includes New Zealand. As world conditions return to normal and the purchasing power of money increases and living costs decrease, a natural and almost irresistible pressure falls on wages. If arbitration courts are to maintain the established ratio between living costs and wages, current and future decisions are apt to call for lower wage scales. How such decisions will be accepted by the labor unions remains to be seen. The season of declining prices and wages will, therefore, test the efficacy of the arbitration system and the intelligence of labor leadership in New Zealand. As now organized the unions come under the jurisdiction of the arbitration courts thru voluntary registration. It is conceivable that a few decisions reducing wages might inspire unions to refrain from this voluntary registration, thereby rendering the arbitration courts impotent. However, the New Zealander is social-minded, and the unionist there is less likely to resort to this

strategy than the union labor leader in the United States would be.

The business of the Court of Arbitration grew to such an extent that it was necessary to settle many cases before they reached the court; therefore in 1910 the government, thru act of parliament, created Conciliation Commissioners. These are three in number, one selected by the employers, another by labor and the third appointed by the government, representing the interests of the people. This board has been able to settle many disputes and relieve congestion in the Court of Arbitration.

The net result of the decisions of the Court of Arbitration has been to fix a minimum wage for everybody employed for wages in the Dominion, whether belonging to a union or not.



This is a view of the great generators in the Lake Coleridge hydroelectric plant. Seventy-two sites have been selected by the Dominion government for future hydro-electric development. The government has laws which keep the water power rights for the people instead of permitting them to fall into the hands of private individuals.

However, it must be admitted that the system has protected the weak, prevented unfair competition by unscrupulous employers, regulated, standardized and recorded the wages and working conditions for particular industries and districts. In a period of rising prices it has tended to minimize the loss suffered by wage earners as a result of the decrease in the purchasing power of money. In this respect the arbitration laws have been beneficial.

The principle of an eight-hour working day was first adopted by general practice—by legislation in some cases—but now no employer would think of returning to a longer day. It certainly has worked well and perhaps has an influence of longevity, as the average life of the white man there is eight years longer than in the United States.

In 1900 a workmen's compensation act was passed, which insures workers' lives or against permanent disability, to the extent of \$3,750. As this becomes the employer's risk he not only insures against it, but is careful that the conditions under which his employes work do not expose them to any extraordinary risk due to his negligence, for in that case he can be sued for additional damages by the person injured or by the estate of the person killed. We have similar laws in some of our own states.

I look for the minimum of trouble between employers and employes in New Zealand once the country becomes dry. The efficiency of labor will be greatly improved. The "go slow" policy, which was founded on the inability of the booze fighter to keep up, will disappear.

New Zealand is more universally unionized than any other country in the world. Even the reporters on the newspapers belong to a union and work only eight hours a day. The destiny of any country depends to a large extent upon the reliability of its press.

It is evident that New Zealand is headed right. The government and the people are working closely together, yet there are two prominent examples of bad conditions which so far they have been unable to cure, and which they generally

admit are hurting the country. One is booze and the other is the P. and O. steamship monopoly. This corporation, an English company, owns the Union Steamship Company stock



The second largest hydro-electric development in New Zealand is at Waipori Falls, near Dunedin. The photograph shows a part of the power house. Because of cheap power thus available, Dunedin's industrial future is assured.

and nearly all the other steamship companies doing the shipping business of New Zealand. Twenty-five per cent of the net profits of all New Zealand is sucked into the treasury of this corporation thru excessive rates. In addition, the service on the ships is bad; in fact so bad that even the stewards were on strike all the time I was in New Zealand because their living quarters and conditions—not their wages and hours—were unbearable. Since this corporation got control, prices have been advanced 500 per cent. The shipping public states that 100 per cent would have been a proper war condition increase. If the New Zealand government could tax the foreign-owned corporations the same as she does absentee landlords she might force the shipping business back to her own country again.

Prohibition was lost in New Zealand at the last election by only 3,000 votes. Every saloon in the Dominion must pretend to be a hotel, in other words, a public house, so the saloons are called “pubs.” For sixty days before the last election nearly everybody in the country had free drinks. As it is necessary to have a room in the “pub” in order to get drinks after six o’clock or on Sunday, one can imagine the conditions of immorality as well as drunkenness that exists.

The leaders of the labor unions are coming to realize that high wages will do the workingman no good as long as there are “pubs.”

It is generally conceded that prohibition will carry at the next election, for the union leaders are joining in with the churches and right-thinking citizens on this subject. One hears many different tales of the effect of prohibition in our own country as told by the friends of liquor over there. The medical profession in New Zealand generally favors prohibition. They say that the use of alcohol causes an alarming amount of insanity. Every judge I talked with, from a judge of the Supreme Court to a country magistrate, stated that the increase of crime was due to alcohol. New Zealand is going dry, because the government is of the people for the good of the people, and most of them are sound-thinking people.

On an asset and liability basis—or being worth more than

she owes, not including personal property—New Zealand is solvent. Her liabilities consist of one hundred million pounds which she owed before the war and which is now two hundred million. Her quick assets consist of a sinking fund of twenty million pounds toward paying off the war debt. Second, the government-owned railways, telegraphs and telephones, as well as the postoffice buildings, which originally



These pictures of the docks and water front in Wellington are typical scenes in New Zealand ports. The P. and O. steamship monopoly is one great handicap to commerce developments. It is estimated that twenty-five per cent of the net profits of New Zealand goes to this shipping trust thru excessive rates.



This is the girls' high school in Dunedin and reflects New Zealand's progressive attitude toward public instruction.

cost seventy million pounds and on the present basis of cost would be valued at twice that.

Third, the government owns millions of acres of land, some of it worth as much as \$300 an acre.

Fourth, the state life and fire insurance companies and the Public Trust Office now have millions of pounds sterling as assets to offset part of the liability the government may have created in war.

Fifth, the water power development or possible hydraulic developments, as well as those already in existence, are owned by the government, and if it wished to operate them on a profit basis they alone would pay the interest on the national debt. However, it has been the policy of the government to furnish all communities with light, heat and power at a price slightly above the cost of production. They have the cheapest light and power of any country in the world.

If New Zealand were cut off from the rest of the world and had to make everything for herself, she could get along nicely with the minerals found in her own country. If she used her hydro-electric power to the fullest extent it would be necessary for her to become an exporting nation. In that case she would have to import considerable raw stock. The



The "little red schoolhouse" in New Zealand isn't always red, but it is efficient, and, judging from the picture, well patronized. There are 2,375 primary schools, and attendance is compulsory for children between the ages of seven and fourteen.

government has picked out seventy-two sites where large hydro-electric developments can be made. So far only two large installations have been completed. It was estimated that there is possible development in sight of one horse power for every man, woman and child in New Zealand. As the world grows short of coal for light, heat and power, New Zealand, with her wonderful water power, may become one of the leading manufacturing nations of the world.

A country to be financially responsible must have sound banks and the public must have confidence in their banking system. Every bit of paper money you find in New Zealand is good. There are six banks of issue in New Zealand, or, in other words, six banks which are allowed to print and circulate paper money. For every dollar printed there must be a deposit of a like amount with the Dominion government, in coin or

government bonds. At least one-third must be in gold coin. Until the war you could exchange paper money for gold. After the war started it became evident that many would try either to hoard gold or try to get it out of the country, which was contrary to law. So the government declared all paper money legal tender and refused to permit any gold to leave the treasury. In this way New Zealand has held on to the greater part of her gold, and this explains why the country is in such good financial condition.

Education at the public schools is free, compulsory and purely secular. Attendance at a registered school is required of all children between the ages of seven and fourteen, except when special exemptions are granted.

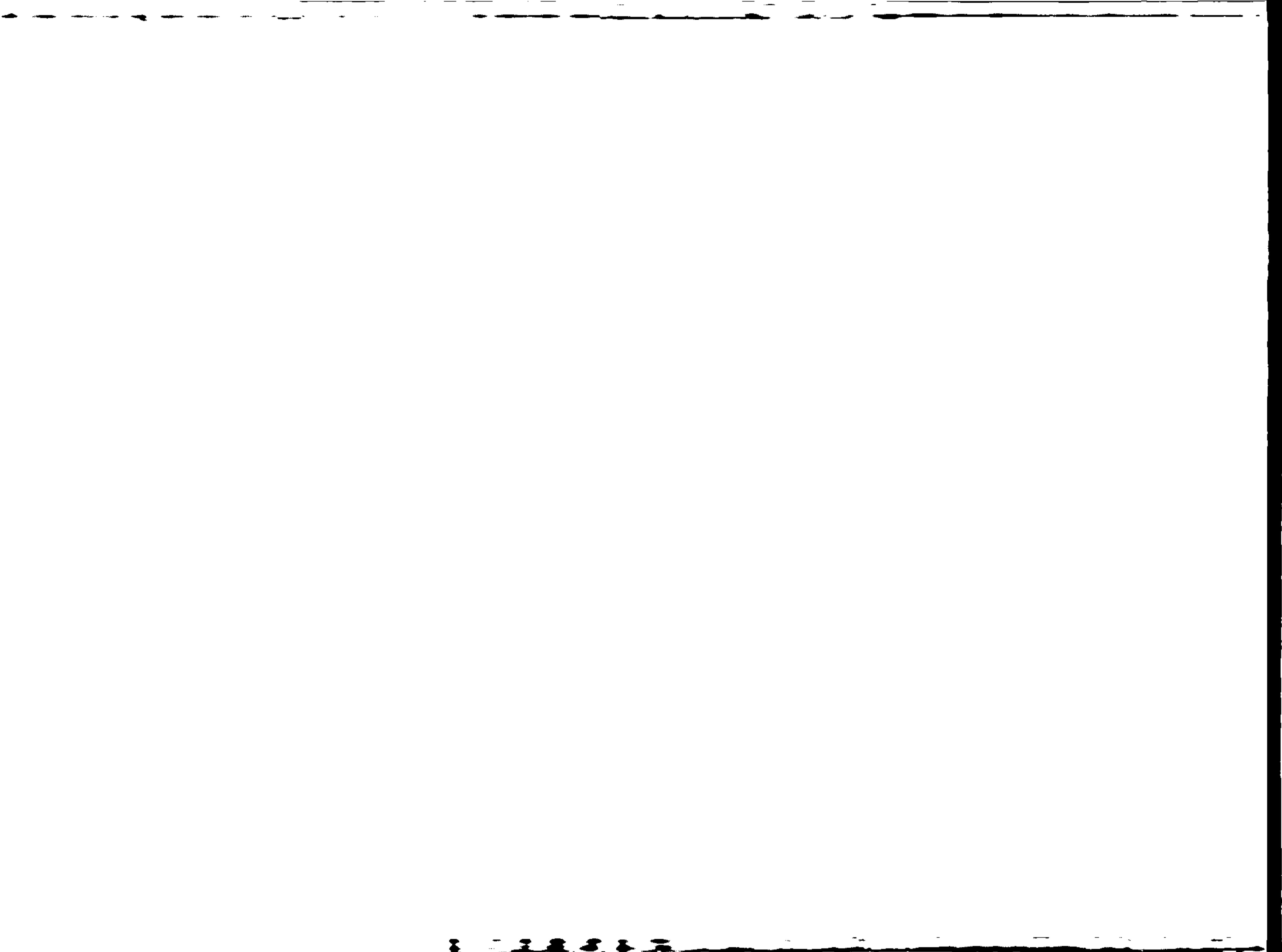
The primary schools number 2,375, while the registered



New Zealand has many superior colleges and technical schools. The photograph shows a part of Canterbury University, in Christchurch.

private primary schools are over two hundred. There are thirty-four endowed colleges, grammar and high schools and eight technical schools. Industrial schools, both state and private, number twelve, and the state has schools for the deaf, the blind and for backward children.

Higher education is provided for in the four universities which are affiliated as the University of New Zealand. They are located at the four large cities, Auckland, Wellington, Christchurch and Dunedin, and each has a specialty in technical training. At Dunedin is located the one medical school in the Dominion. The other universities specialize in engineering, commerce, law, and navigation. Ten per cent of all the land in New Zealand originally was set aside to create a school fund.



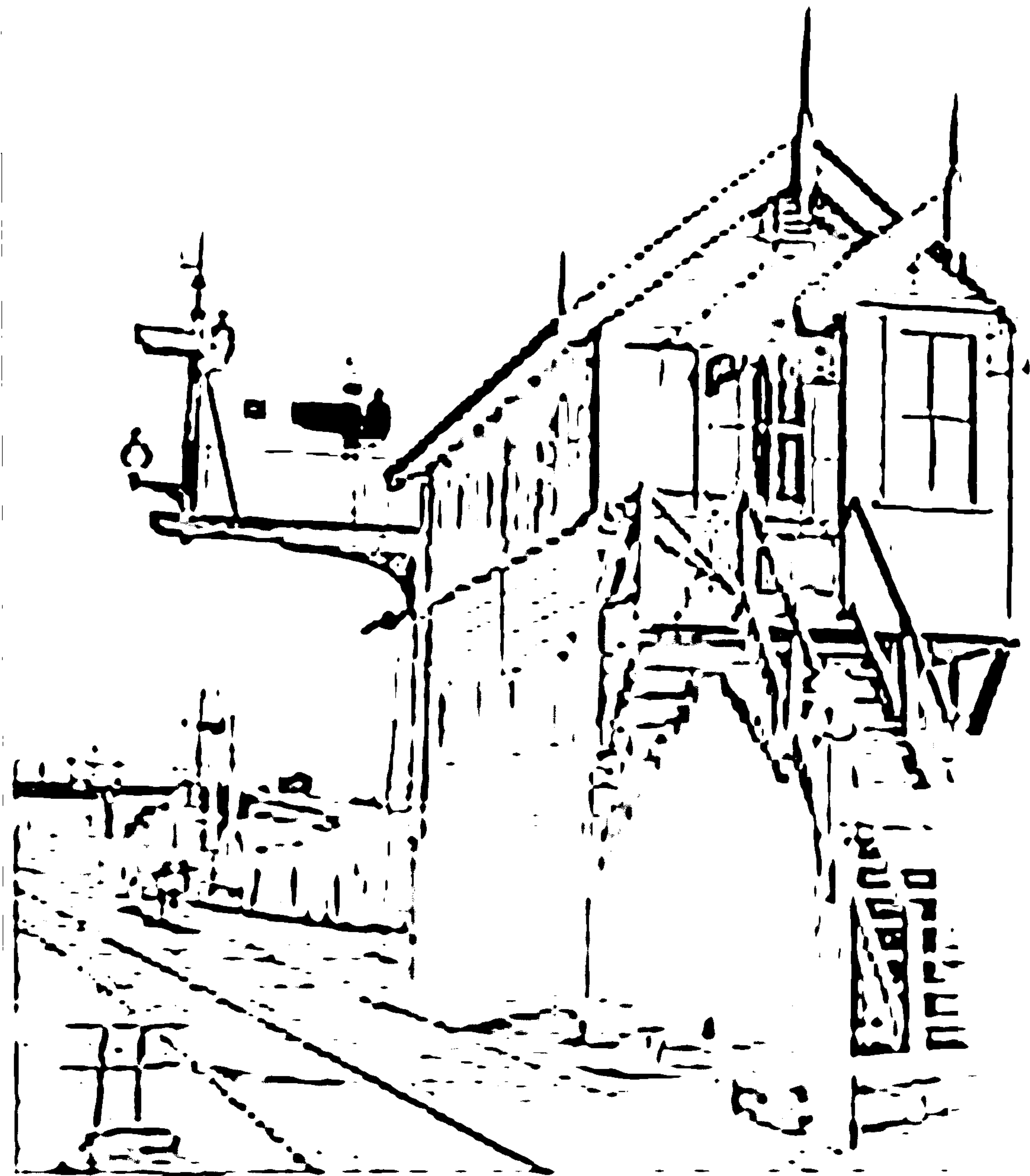
New Zealand land laws have been drafted to encourage the farmer who farms the soil and to discourage the land monopolist who farms farmers. This is a picture of a settler's first homestead on a bush clearing.

CHAPTER V

GOVERNMENT-OPERATED INDUSTRIES

IN THE United States business men are very wary of government ownership. They are apt to dash madly for cover if any one seriously suggests government participation, in any form, in business. Their attitude in this particular always reminds me of one of my experiences in East Africa. I had taken an expedition into the jungles to get pictures of the wild animals in their native haunts. On this occasion Major Outram, famous big game hunter who but recently died in the Mombasa Hospital from injuries sustained when he rescued a native from a wounded lion, served me as guide and was in charge of two or three hundred natives who made a drive over an extended territory to work the wild game up to our cameras.

Major Outram knew his business,



New Zealand trains are operated by a modern block system, and this is a typical signal tower on the trunk lines. A towerman once obligingly stopped a train a passenger who was running after it. A justice of peace who was on the train promptly fined the belated passenger for trespassing on the right-of-way.

and also, he knew how to handle natives. The drive was progressing beyond our expectations. The natives were closing in, and at the edge of the clearing numerous jungle animals were showing themselves. The sight of them was too much for my camera man, and, in his excitement, intending to signal the natives that all was in readiness for the final rush that would drive the animals into the open, he pulled his revolver and fired. In the same instant we saw the flash of hundreds of tails and heard a fearful commotion, and then all was quiet. Our animals had bolted, broken thru the line of native beaters and were gone. Major Outram was about the sorest man I ever saw, but another drive under his direction ended more auspiciously, perhaps because we saw to it that the photographer had no revolver.

When you mention government ownership in the United States it has about the same effect on business men as that revolver shot had on the jungle animals. Our so-called "radicals" have constantly pointed to New Zealand as proof that government participation in business is a panacea for all industrial ills. Repeatedly I had heard that New Zealand was a socialistic government and that it was following the Japanese system of having the government own all the land and only leasing it to those who had use for it.

Having always been of the opinion that it is necessary to go to a country to get a correct viewpoint of its political organization, business institutions, living conditions, social philosophy, climate and products, I was not surprised to discover on my arrival in New Zealand that the facts had been distorted to serve the purposes of those who had a cause to plead.

New Zealand is neither plunging pellmell into socialism nor restraining her citizens in the ownership of such land as they can profitably use. No doubt the unfavorable reports circulated in the United States have emanated from our big trusts and corporations which view with alarm New Zealand's



The telegraph office at Dunedin. All methods of communication are under the control of the postoffice department. There are 14,000 miles of telegraph lines and rural telephone lines, which latter are an extension of the telegraph service.

success in business, as much as by our radicals who have overstated this success in order to bolster their arguments.

New Zealand learned early that you cannot reach the big trusts and corporations thru legislation and that state competition is the only way inordinate profits and domineering dispositions can be curbed.

The postoffice, railroads, telegraphs and telephones are the only completely government-owned, controlled and operated businesses in the country. That is because they are natural monopolies and must be operated as national government monopolies to reduce costs.

There are three shining examples of businesses into which the government has gone into competition with private business. The result in each case has been that costs to the public have been cut a third and the government, as well as



The Postoffice Building in Auckland houses both the mail and telegraph services. It is the finest building of its kind in the Dominion.

private corporations, still make a profit. They are the public trust business, fire insurance and life insurance.

Every man or woman who saves and accumulates any property is most anxious about how it is to be administered after death, so that the proceeds may reach those for whom they have been saved, without being dissipated or lost thru irresponsible trust companies, lawyers or banks. The cost of administering many estates is almost equal to the amount bequeathed. Trust companies and banks which act as trustees frequently pile up charges against the estate thru employing big attorneys to look after this or that, and while a man may think he is leaving something to his family, he would be shocked if he could come back to life a few years after his death and discover his estate had been squandered in "administration."

This is the experience which the early New Zealanders had, and within twenty-five years after they had organized a

government of their own they had established a state trust office, not as a state monopoly but as a government enterprise in competition with corporations and private individuals in the same business.

With the government back of the state trust office, the public took no chance, and a man could die knowing that what he had left would not be lost, also that the charges would be less than if he had left the settling of his estate to some private individual, attorney, bank or trust company.

The Public Trust Office of New Zealand was authorized in 1872. It was the first institution of its kind and has served as a model for the creation of other public trust offices in various parts of the British Empire. The Consolidated Fund of the Dominion is obligated to make good any loss for which a private trustee would be responsible. The head office is located at Wellington, the seat of the government, and there are fourteen branch offices thruout the Dominion, administered by deputies to the Public Trustee.

In connection with the office there is a board, to whose directions the Public Trustee is subject, and which also acts in an advisory capacity in respect to all such matters relating to the administration or business of the Public Trust Office as may be referred to it by the Minister of Finance. This board controls the investment of moneys from time to time in the common fund of the Public Trust Office or otherwise in the hands of the public trustee and available for investment.

The office is designed mainly to afford, at low rates of commission, a secure and convenient recourse in every case where a person residing in either New Zealand or abroad desires to make a will or to appoint an agent or attorney in the Dominion. In addition to administering the estates of deceased persons and acting as attorney or agent, the office is required to undertake various other duties. For instance, the Public Trustee administers the estates of all insane persons for whom no guardian has been appointed. He also administers various reserves thruout the Dominion that have been set apart for the benefit of the native race, as well as dealing with unclaimed



About the only railroad that is not government owned in New Zealand is the tram line built by timber companies for lumber hauling and roads built to serve privately owned coal mines. This is a typical scene in the lumber districts.

lands and unclaimed property. The custody of all department superannuation funds is placed with the Public Trustee, who administers many of the larger relief funds subscribed by the public to alleviate distress caused by mining accidents and other disasters.

The Public Trustee also has duties in connection with land settlement, education reserves, bankruptcy, shipping and seamen, war regulations and convicts' estates. The Public Trust Office is a department of the government service and the security and fidelity of the administration is pledged to maintain the integrity of capital funds placed in the Public Trust Office, either without any directions for investment or to be invested at the option of the Public Trustee in any of the securities in which, unless expressly prohibited, he may invest all capital. All moneys coming into the office, unless expressly directed by the will or instrument of the trust, fall into what is called a common fund, any deficiency in which must be made good by the state. The money in this common fund is invested by the Public Trustee in first-class securities and the interest thus earned enables a common rate of interest to be fixed and regularly credited to all estates for which funds are held.

This system of investment results in trust funds earning as much as well-conducted bank stocks. The Public Trust Office has no interest whatever in the earnings of the trust funds, but only in the commission for distribution and settling up of the trust, which is from two and one-half to three per cent of principal and earnings of the whole estate.

This Public Trust corporation is entirely separated from politics and goes along just like a private institution. It owns its own buildings, and pays the same government and local taxes and postage that any private institution pays. The only difference is that its reliability and responsibility is guaranteed by the government, and its customers take no chances. The employees are under civil service, and while they are not receiving as high salaries as if they worked for private concerns,



Mr. J. W. MacDonald, Commissioner of the Public Trustee, who manages the Public Trust Office.

they are sure of their jobs as long as they do faithful work.

The Public Trust Office was not intended originally to be a profitable corporation, but the great confidence which the public has in it throws nearly all business in New Zealand to it and its net profits now are over \$300,000 a year.

The Public Trust Office is most admirably managed by J. W. MacDonald, Commissioner of the Public Trustee, and a very high-class attorney. This government-owned, backed and guaranteed corporation paid an income tax of \$80,000 to the government last year. It has also every other tax and expense a privately owned and operated company would have, even down to the postage stamps it uses.

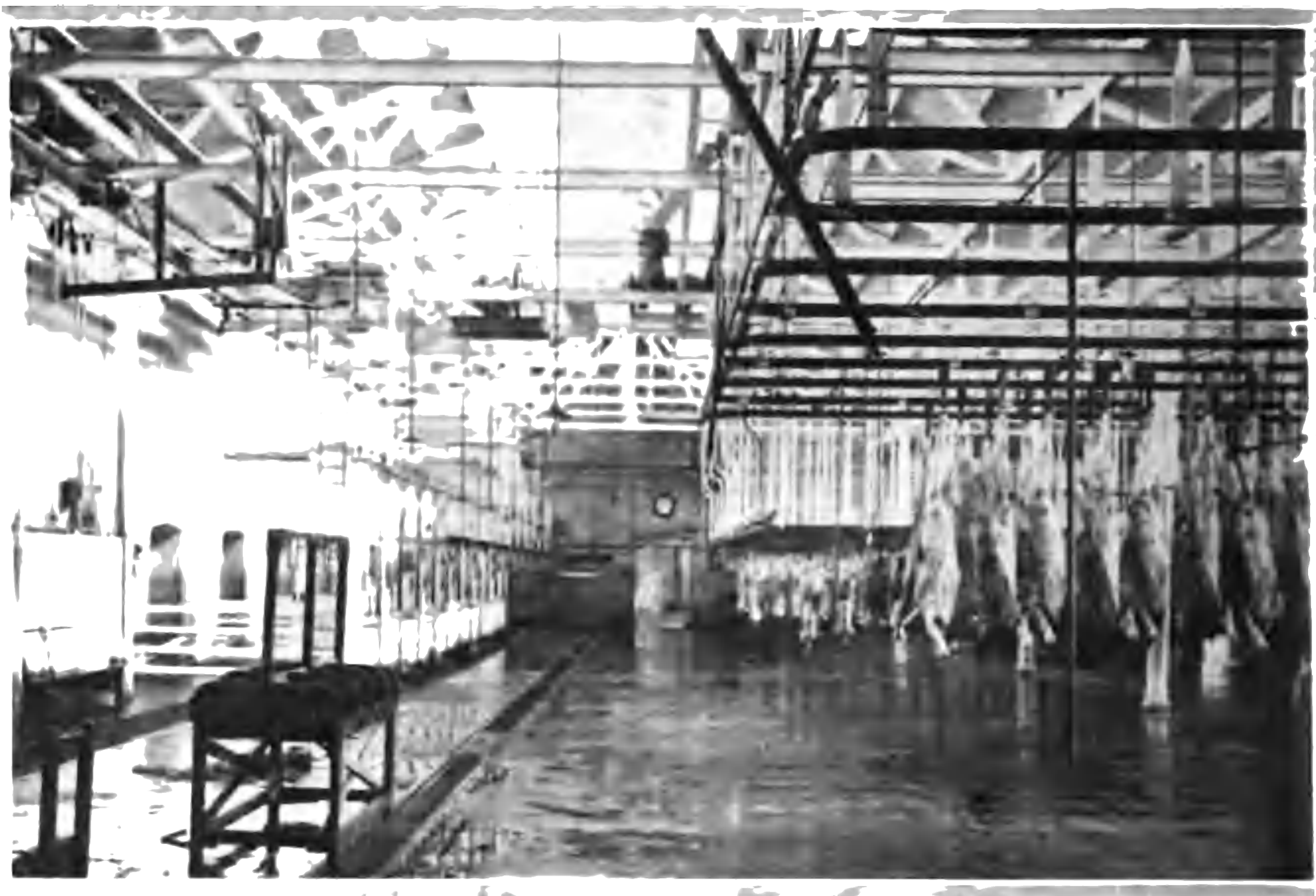
There are six branch offices in New Zealand cities where the company owns its own buildings and has salaried employes. It also has agents on commission in every township. There should be a public trust like New Zealand's in every State in the United States.

The first parliament was held in 1854. For twenty-five

years after that old and new settlers kept up life insurance policies in the home country. In 1865-6 there came a great smash in life insurance companies in Great Britain, many went under and policy holders lost their life savings. It was after this, in the year 1870, that the government of New Zealand started the government-owned, controlled and guaranteed State Life Insurance Company. All other life insurance companies were permitted to do business, but so many of them were unsafe that the public could not discriminate and threw their business to the State Company, until it carries over 56,000 policies at the present time. They bear an annual premium income of \$2,000,000, with a total sum of insurance payable at death of \$70,000,000. This in a country with only 1,300,000 population. The company has accumulated assets of \$30,000,000. Outside the buildings which it owns and occupies in various parts of the country, the money is invested in mortgages on property and in government bonds. Also a large sum is kept as cash on hand.

The government life insurance company does not regulate the price of life policies. That is a matter of competition. But on accident insurance it does establish the rate charged and conditions under which policies are issued thru a special act of parliament, and all companies doing accident business must conform to this universal law and condition.

The life insurance business in New Zealand is very profitable. The average life from birth to death of the white New Zealander is eight years longer than that of the average white man or woman in the United States and nine years longer than in England. Of course nobody objects to paying his insurance even if he has to live eight or nine years longer to collect. On the other hand, the government writes an endowment policy whereby by paying so much money at once to the company, or so much a year for a stated time, he will be granted an annuity as long as he lives. This plan is not profitable to the insurance company, they say, because the people live too long.



A modern abattoir in New Zealand. The government does not hesitate to go into the packing house business, but whether a plant is owned by private or public interests, it is subject to rigid inspection and regulation.

The Maoris, however, are not good risks, for their average life is much shorter than the white man's.

Other countries are showing an increasing interest in the mortality figures of New Zealand. I was fortunate in having as a fellow passenger on the R. M. S. *Makura*, out of Vancouver for New Zealand, Dr. Victor G. Heiser of New York City, internationally known as an authority on leprosy. He probably has examined more lepers than any other physician in the world. Dr. Heiser gave me an interesting review of the experiments which produced a cure for leprosy from chaulmugra oil, obtained from the gynocardia tree, found in India. Sir Leonard Rogers was one of the first to experiment with chaulmugra oil. The chief difficulty in successfully treating a patient with this oil was in the inability of the patient to



This is a view of the freezing works at the Burnside packing plant, where much of the mutton grown in Otago Province is prepared for export. The Dominion government takes every possible precaution to guard the reputation of New Zealand mutton in foreign markets.

retain it in his system. Dr. Isador Dyer of New Orleans, La., discovered that the addition of camphor removed the nauseating effect of the oil. Since this fact was established rapid advance has been made in the treatment of lepers, and today such eminent authorities as Dr. Heiser look on leprosy as a curable disease if placed under competent medical care in its earlier stages. Since 1914, Dr. Heiser has been with the International Board of Health of the Rockefeller Foundation, and he was going to New Zealand to study health conditions there and find out why the New Zealander lives longer than citizens of the United States.

I have now told you about three lines of competitive business in which the government is engaged. These government companies have three advantages from the start. First, the absolute confidence of the public; second, no capital was invested in the business, as the government guarantee was sufficient; third, the men hired by the government were capable

and experienced, and also knew that they would not be taken back by the regular companies they had left and must make good in the new enterprise.

How long will it be before the United States will be free enough from corporation influence to establish healthy state competition and bring the trusts and combines to time? Echo answers: "When?"

Until 1905 the fire insurance companies doing business in New Zealand had a monopoly of writing all the fire insurance policies. They were organized into a trust the same as the fire insurance companies are in the United States, there was no competition and the public paid the highest rate possible. The Rt. Hon. Richard Seddon, who then was and had been for some time the Prime Minister of New Zealand, believed that the only way to regulate fire insurance rates was thru state competition—not a state monopoly. A commission was appointed to investigate the matter. It reported against it and cited a number of failures by other governments which had gone into the fire insurance business. Seddon, however, insisted upon Parliament incorporating a fire insurance company, backed by the state. The proposition carried by a small majority.

The new state company began doing business by hiring from the old-established companies the best men and paying them good salaries. They did not start with the idea of a cheaply conducted, politically controlled business institution, which is usually the reason for the failure of any business in which municipalities, states or nations engage.

The first year the new state-owned fire insurance company cut the rate ten per cent. The old-established companies met that rate and reduced it still further, until the rate on many classes of risks was thirty-three per cent below what it had been when the government entered the business. This was promptly met by a similar cut by the government, but since then there has been no reduction in rates by either.

For the first ten years after the government started its system every known trick was brought into play by the private



Both the Dominion and provincial governments go in for farming, not as competitors of the farmers, but as instructors. Much experimental work is done along the line of dairy farming. One of the best experimental farms in the Dominion is maintained by the government at Weraroa. The picture shows one of the model milking sheds on this farm.

companies against them. They tried to boycott the people who took out policies with the government, but the British sense of fair play, which is very strong, soon took care of this. It only made business for the new company.

This gave the new company larger lines of insurance than it was safe to carry on any one risk, for it is the policy of all sound companies to limit the insurance on any one risk to ten or twenty thousand dollars. That was where the old companies thought they had the new one, and this was the hardest proposition it had to overcome. At this juncture the great Lloyd's Insurance of England came into the game and underwrote all of the insurance which the government fire insurance company wanted to pass on to other companies.

For ten years this condition existed. Then the old insurance companies in New Zealand got enough of it. Today they underwrite from the government company the same as any other. The government company still does the largest business and has made a profit, which it has on hand as a surplus, earning interest, of over \$10,000,000. Three-fourths of this is invested in high-class securities.

The original charter under which the government company

operates provided that when it had earned sufficient surplus to make it safe, the profits should be returned to the policy holders. The company now is believed to have reached that point and fire insurance in New Zealand will soon take another drop, and policy holders will be really working on a mutual basis. Altho this is a government-owned and backed insurance company and policies are guaranteed by the government and employes are under civil service—which insures their positions if the government changes from one party to another—political influence does not reach the company at all, and it is a well-managed business institution.

The government also operates as state monopolies the postoffice department, the railroads, telegraph and telephones and radio wireless. All methods of communication are under control of the postal department and I found it most efficiently conducted.

I have called it the postal department. Those in charge of it much prefer that it be called “the service,” on the grounds that its many branches make it the most useful organization in the country. Evidently the people think so, too, for they make much use of their postal service, and it does a business of around \$10,000,000 a year, making a profit of \$1,250,000. Compare that with the United States postoffice run at a loss.

Of the 2,350 postoffices in the Dominion, 800 also act as commercial banks for the public and the government. More than half a million accounts are carried in the postal savings bank, the average depositor carrying a balance of \$250. Deposits as small as twenty-five cents will be received, but interest is paid only on sums of five dollars or over. Deposits up to \$1,500 bear interest as high as five per cent; from \$1,500 to \$5,000 the interest is not over four per cent, while no interest is paid on sums over \$5,000. The postal savings bank is held in high esteem, as is evidenced by the fact that it carries ten times as great deposits as the five savings banks of the Dominion, which are not government operated.

The postal savings bank invests its funds only in high-class securities that can be realized on quickly; it does not



Viaducts of steel and concrete have replaced the wooden bridges on the main lines of the government railways. There are scores of them, because railroad building in New Zealand is a difficult task on account of the mountains and streams. Tunnels are frequent. One of them, now under construction on the South Island, will be five miles long.

deal in any way in land, nor does it put any money in commercial ventures of its own. Virtually every government department deposits money with the postoffice department and makes its payments thru the postoffice. This does away with a lot of red tape, as the department pays all small bills of less than twenty-five dollars, charging the proper department for the expense. Pensions of all kinds are paid thru the postoffice, and collections are made in the same efficient manner, for hunting and fishing licenses, premiums on government insurance, and fees of all kinds.

Telegraph lines were first operated by the provincial governments, but they were later taken over by the Dominion government, which extended the lines to all parts of the North and South Islands; today there are some 14,000 miles of telegraph lines, counting in the rural telephone lines, which are

part of the service. Telegraph offices are located in all post-offices of any size, and are much used, as the rate is very reasonable, averaging about two cents a word thruout the islands.

Telephone service is on the verge of great development in New Zealand. Even in a country only a thousand miles long, where

To the American, accustomed to mammoth engines and ponderous freight cars, some of the rolling stock on a New Zealand railroad looks ridiculously small. When compared with an American flat car this little eight truck looks like a toy.

mail can be sent from one end to the other and delivered in slightly more than two days, there has developed a demand for personal communication by long-distance telephone, which is being met by the government in the rapid extension of its 175,000 miles of wire. In the large centers of population automatic telephones are being installed to replace the obsolete crank system which is generally employed. There now are 75 central exchanges and 240 sub-exchanges, thru which connections can be made with 70,000 telephones. In the big cities the overhead wires are giving way to underground circuits.

There is little telephoning from the corner drug store in New Zealand, for the government has installed booths on the street in all the principal towns, both in the downtown district and suburban sections, where they may be used at charges ranging from two to six cents a call.

Wireless (in 1921) is still in its infancy in the Dominion, altho there are powerful stations at all the big centers and smaller stations at all the ports. They are connected with the

telegraph and telephone systems, so messages intended for ships at sea or for nearby islands are sent forward promptly. There is agitation now for the formation of wireless instruction courses at one of the four universities of the Dominion and for the passage of laws which will regulate the use of radio and at the same time permit its development.

New Zealand is connected by cable with Vancouver, B. C., Canada, and with Sydney, Australia. The cable to Vancouver touches Norfolk Island, Fiji and Fanning Island, and the deep-sea portion of the cable between Vancouver and Fanning is said to be the longest in the world.

The manner in which the government conducts the railroads in New Zealand is interesting to the American. Fresh from traveling across the American continent from Chicago to Vancouver, Canada, in luxurious broad-gauge cars, with dining cars and comfortable Pullmans, we were rather doubtful



Sheep play a most important part in the prosperity of the Dominion. They make up a very large part of the freight handled by the railways. During the marketing season trainloads follow each other a few miles apart. Many sheep are shipped from the bush districts each year to the plains, where the final fattening for market is done.



This is the railway station in Dunedin, and it is the only one in the Dominion which is a credit to the country. Even large cities have long wooden structures, altho plans are completed for modern stations at Wellington and Auckland.

whether we were going to be comfortable when it came time for us to take our first railroad trip in New Zealand. The 3,000 miles of railroad in both islands of the Dominion are narrow gauge, three feet six inches wide, and the coaches are only fifty feet long, and we suspected that we were in for a rough time of it because of the mountainous character of the country in the North Island thru which we were to travel.

It was very surprising, therefore, to find that the coaches rode easily; there was little bouncing and we were quite comfortable. When in 1870 the government took over the few miles of railroad then constructed it was faced by the problem of building as rapidly as possible and at as small a cost as possible thru a rough country. The present standard narrow-gauge was the result. It serves admirably, for the longest run is

the 426 miles between Auckland and Wellington, which requires seventeen hours. On this run, too, are the only sleeping cars in the Dominion. They are not the roomy affairs we are used to here in America. The cars are divided into compartments with either two or four berths, and a narrow hallway running along one side of the car. When it is time to make up the berths the passengers must either stand in the hall or find a place in some other coach. The same thing happens in the morning when it is time to take up the berths. It was a tight fit for the four of us who occupied one of the larger compartments, especially when two of us weighed more than two hundred pounds each.

To assure yourself of a seat it is necessary to make reservations in either compartment cars or chair cars when you buy your ticket. Then you have to be in your seat fifteen minutes before the train starts if you want to hold it down. Otherwise the conductor, or guard, takes up the slip that shows the seat is reserved and it belongs to the first comer. Reservations are not made for seats at way stations except by telegraphing ahead, and the passengers holding chair car tickets,



This is an interior view of the Dunedin railway station, easily the finest station in the Dominion.



Accidents will happen on the best of railways. This is the most common kind of accident on New Zealand rails. In the hills and mountains earth and rock slides frequently block the rails. This passenger train came along just in time to be caught in a slide. The engine and two coaches were derailed, but there were no casualties.

it, so when you finally reach your destination the ticket looks like a sieve. In between times an inspector comes around and takes a punch at the ticket, too. Passengers in the chair cars on a night run have a miserable time of it, for this ticket-punching goes on just the same during the night, and the conductors have to be pretty diplomatic to avoid ruffling the feelings of those whom they awaken so often. I found all the train crews with whom I traveled exceedingly polite.

Most of the station buildings are frame. Those at Wellington and Auckland are very shabby affairs. The one at Christchurch is a little better, but only Dunedin, the smallest of the four large towns, has a commodious station of brick and stone. However, no matter how small the station, it is liberally decorated with signs, by reading which it is an easy matter to find anything you want. You can't possibly get on the wrong train if you can read. There are signs on the platform which

but not berth tickets, have a right to occupy seats in the sleeper until bedtime, when they must get out and hunt seats elsewhere.

There is no system on the New Zealand railways for giving passengers "checks" to show they have presented their tickets. Instead you are required to produce your ticket every hour or two, and each time the conductor punches

point out the right train, and the coaches themselves are marked on the sides. A bell rings half a minute before the train pulls out and you still have time to get aboard.

The British habit of having tea at frequent intervals is recognized by the New Zealand railways, and at many of the stations the train stops long enough for every one to get off and have his tea at a refreshment counter. You may also take the cup of tea into the coach. Each dish is marked with the name of the station where it belongs and is returned eventually.

Great care is exercised by the engine crews to run the trains smoothly. They glide out of a station and pick up speed without the jerking and bumping which we have to endure in America. The average speed is between twenty-



Pulling up what is said to be the steepest railroad grade in the world, over the Rimutaka Mountains, where for three miles the tracks drop one foot in every fifteen. Special locomotives, with steel shoes to grip a center rail as a brake, are used to handle trains on these grades. Terrific winds sweep these mountains, and windbreaks are built to protect the trains. On two occasions trains have been blown from the tracks.

five and thirty miles an hour, altho they often make forty miles on the level. A block system is used to avoid collisions, and in the forty years they have been operating few accidents have occurred and only four lives have been lost.

The wind caused one accident when it blew over a train on what is said to be the steepest grade in New Zealand. There is a three-mile stretch over the Rimutakas Mountains, a few miles from Wellington, where the track drops one foot in every fifteen feet. Special engines are used on the mountain and double-headers on the up-grades. There is a sort of

The postoffice building in Rotorua.

brake, a kind of third rail, which is gripped by a steel shoe, that is used on the down-grades with a heavy train. The winds which sweep over the mountain are so violent that many train sheds have been built to protect the trains.

The Dominion Public Works Department builds all railways and turns them over to the government when completed. The lines now in operation have cost \$200,000,000, an average cost of a little more than \$60,000 per mile, including all equipment and buildings. The railways have been looked upon by the government more as adjuncts for the development of the country than as an investment from which great revenues were to be derived, and for many years a profit of three per cent was satisfactory, any greater profit being returned to the public in the shape of lower rates. At the present time around four



Frankton Junction, a typical New Zealand railway station.

and one-half per cent is the profit. The passenger rate is two cents a mile.

The government seems anxious that the people of New Zealand shall see their own country and it encourages the young people by giving them a reduced rate if they are under twenty-one and are learning a trade or business and must travel by rail to work. Reduced fares are also given students, and in the outlying districts where there are no schools free fare is issued to children within a limit of sixty miles.

There is a special ticket which costs \$80.00 on which one can travel to different parts of the country within a period of seven weeks. You can travel on this ticket night and day continuously for seven weeks. There is no limit on the mileage. Families of not less than four persons may travel at two-thirds the regular rate when they buy a season ticket to be used in going to and from work. There are many cases in which one may get a reduced rate, all calculated to help the young and those not financially able to pay. The railroad is run for the people, not the stockholders.

Those traveling from the North to the South Island, or vice versa, are promptly transferred from the train to a com-

fortable steamer which makes the 175 miles between Wellington and Lyttleton in an overnight run. The government has established shops in all of the large cities for making coaches, and locomotives are made on both islands. To operate the railways, between 12,000 and 15,000 are employed. They are regulated under special laws, including a superannuation fund for veteran employes.

To serve private industries, mostly coal mines, there is a total of 136 miles of privately owned railways in the Dominion. These connect with the government railways. When the railroads in New Zealand are operated by the cheap water power—turned into electricity—they will be run at a minimum of expense.

If the postoffice, telegraphs, telephones and railways did not pay a cent of interest on the investment, but only on the upkeep, they would be profitable businesses because they belong to the people and everybody has the common use of them at cost price. In New Zealand when you ride on a train you do not pay interest on watered stock.

CHAPTER VI

THE CITIES OF NEW ZEALAND

IF AN American were set down in Queen Street, the principal business thoroughfare of Auckland, New Zealand, with its 140,000 population, and asked to guess where he was, he might very easily, after a casual look around him, think he was in one of our own typical Southern cities—say Memphis, Tennessee, or Atlanta, Georgia. The people passing would look but slightly different from the people at home, the shop windows would display familiar brands of goods, and the automobiles in the street would bear well-known names.

Auckland has the languor and ease which marks all countries in the southern half of the world. It is thirty miles from the open sea to the inner harbor with its five and one-half miles of placid water. Your ship steams along thru the Rangitoto Channel between towering headlands and sheer, forbidding cliffs, which offer the traveler no intimation that concealed in them are huge guns calculated to sweep an enemy fleet from the waters. The ship suddenly rounds North Head into the harbor proper, and Auckland, on the south shore of Waitemata harbor, comes into view. One thing is impressed upon your mind—and later upon the muscles of your legs—the city is built upon hills.

Auckland does not present a magnificent sight from the water. In fact, it is rather commonplace. The waterfront is not a thing of beauty. Only a few years ago it was mud flats and the authorities are still too busy reclaiming land to add to the small area of level ground in the city to devote much attention to beautifying it. As fast as the land is made it is being taken up with wharfs and docks and warehouses.

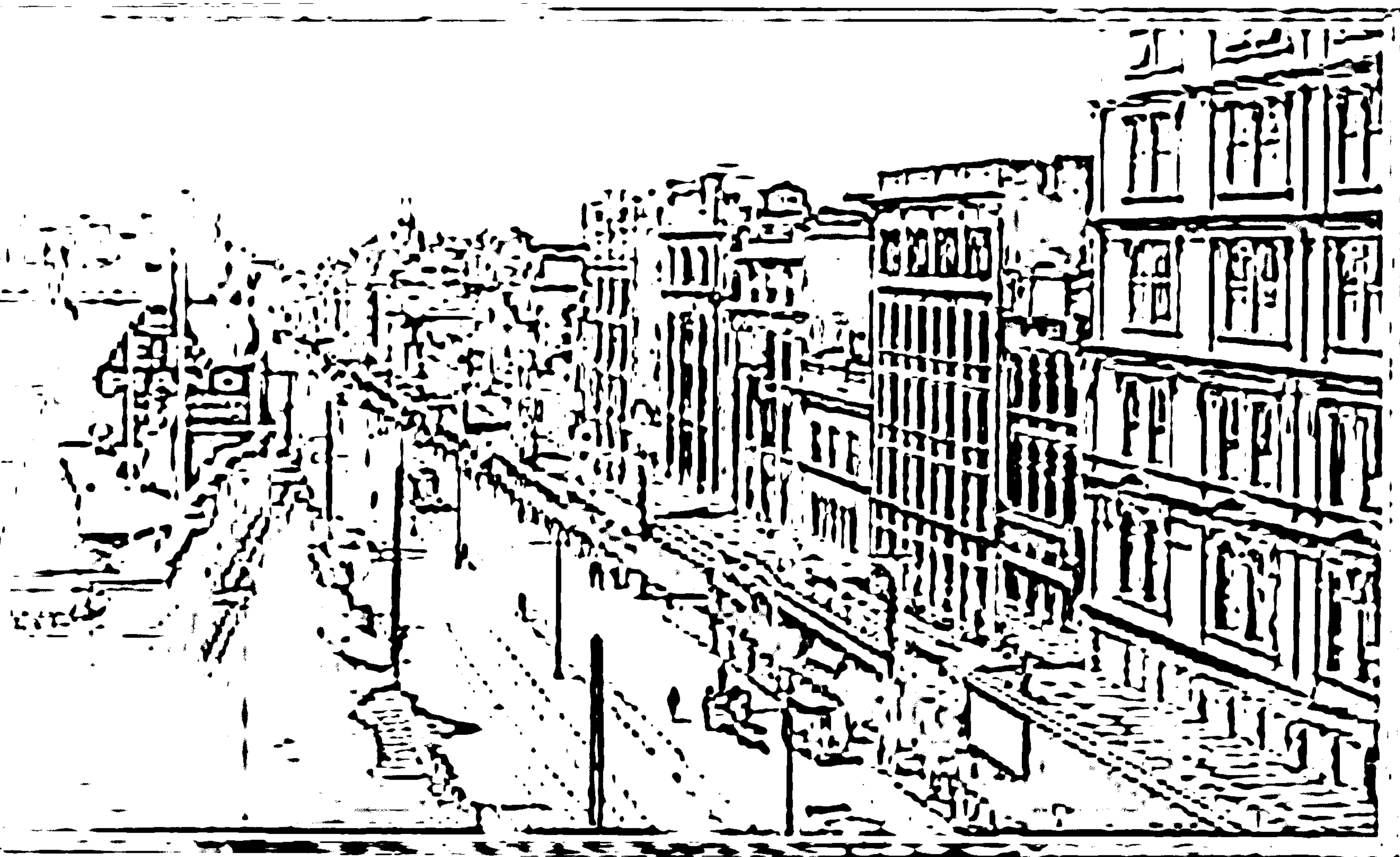
The nine wharfs which now are in use are too few to care for the shipping which makes Auckland the trade center of the Pacific islands. Last year it set a record for increasing



An airplane view of



Christchurch, New Zealand.



A view in Queen Street, Auckland.

imports over its previous high mark, bringing the total up to around \$60,000,000. The exports from Auckland in 1920 were in the neighborhood of \$50,000,000.

Our boat was warped into the dock after a delay of several hours due to the painstaking inspections by the health and customs authorities. New Zealand is careful to maintain the conditions which have made her the healthiest country in the world, and at Auckland, the principal port by which people from other lands arrive, the examination is not casual. The immigration authorities are just and strict, and every passenger is required to set down in black and white all details about himself before he is allowed to land.

My experience was an example. My American passport was taken up, to be returned to me only when I was ready to leave the country. This is the first time I ever parted with my United States passport in any other country in the world except Russia. In its stead I was given a permit to remain in the country three months and this permit bore my personal



Docks and water front of Auckland.

description and the name of the hotel at which I was to make my first stop.

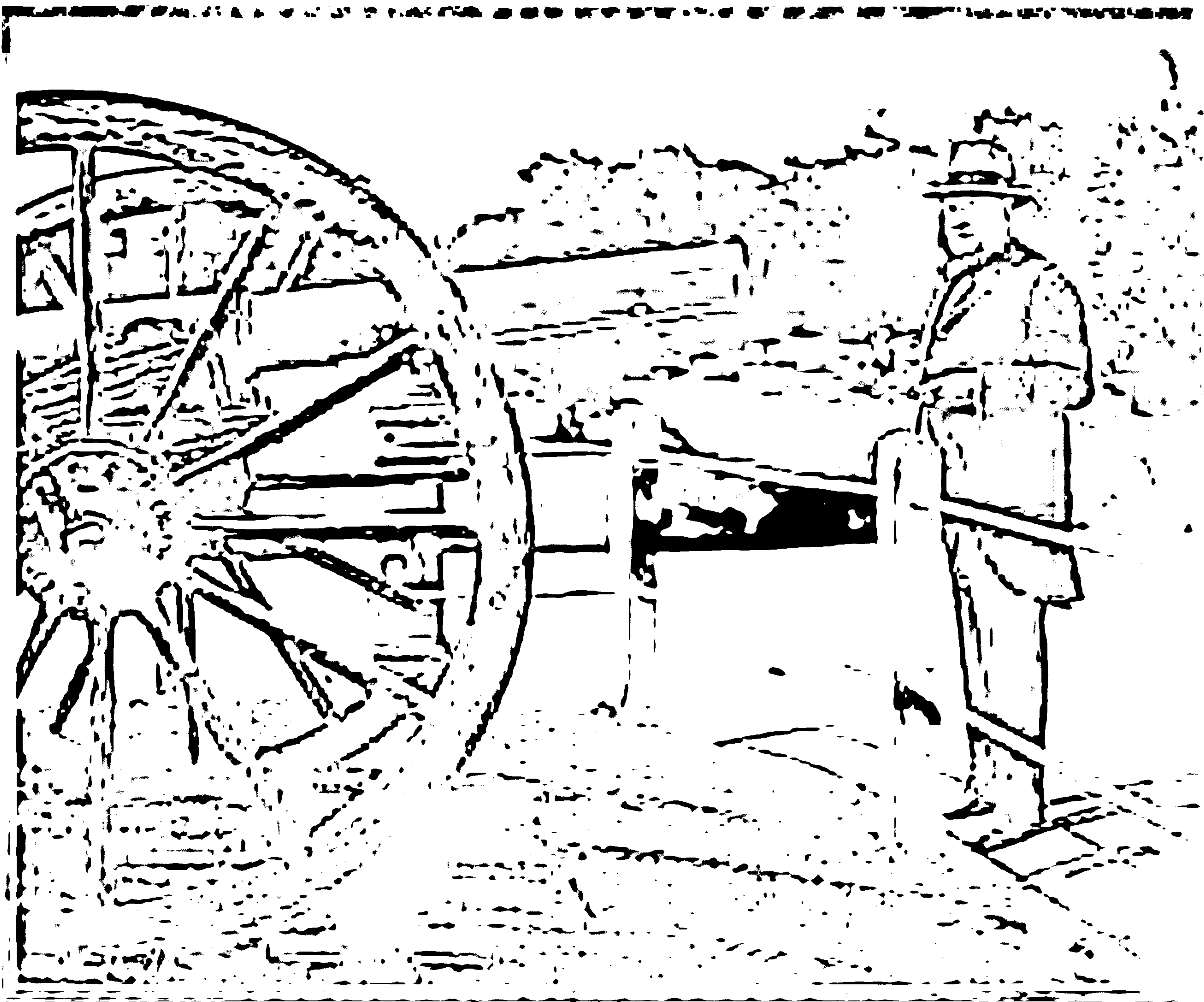
After the first day the visitor to Auckland quits trying to get anywhere on foot. He calls one of the motor cars, which are always to be had at reasonable rates when one considers that all the gasoline is brought from the United States and sells in New Zealand at one dollar a gallon. Climbing the hills upon which the city is built is a trying proposition to the "new chum," as they call a recent arrival. Queen Street, upon which the principal retail business is located, is the nearest level of any of the streets.

When Auckland was originally settled, Queen Street was a gully and its banks were dug away to make the main street of the settlement. As the town grew the new buildings were set upon the hillsides—the third story being level in the rear with the ground—and the winding paths which led to them gradually became narrow streets, little more than alleys, and running at all kinds of angles into each other.

The authorities in the early days of Auckland did not look into the future, and the owner of a bit of ground was permitted to sub-divide it into lots and streets without re-

strictions. As a result the city is a tangled maze to the newcomer.

If you choose to take a street car you can get very good service to any of the dozen boroughs, or suburban towns, which are located within a radius of eight miles of Auckland proper. Ferry boats will take you to still others located on the harbor. The street cars all start from the same place, the foot of Queen Street, and fare is paid in accordance with the distance you travel. Each line is divided into sections and it costs two cents to travel each zone. The longest ride in one



In this picture Mr. Boyce is "facing the cannon" in Albert Park, Auckland. This field piece marks the spot where other cannon were planted in the early history of the city to defend it against raids of hostile Maoris. On this hill were located the barracks of several regiments famous in the pioneer days of the settlement.

direction on the thirty-five miles of car lines is eight miles for twelve cents. The shortest ride is two cents.

The cars are narrower than those in common use in the United States. They are divided by a partition, which separates the smokers from other passengers. There is no standing on platforms; there is no room, in the first place, as part is cut off for the use of the conductor or motorman. There are no negroes seated alongside of you.

Most of the streets are well paved with asphalt or concrete. They tried out an experiment here which made them rather ridiculous in the eyes of the entire country, that is, paving with rock from the extinct volcanoes which surround the city. When it was dry the city was a swirl of volcanic dust and when it was wet the streets were huge mud puddles.

At night the streets are well lighted with both electricity and gas. The city owns the plant which supplies electric lights and power, but the gas company is a private enterprise. Half of the street lights are turned out at midnight. The downtown section is practically deserted at ten o'clock at night. This is probably due to the short business hours, usually never more than seven hours. The show windows are not generally lighted at night. On Saturday all business closes at one o'clock.

Aucklanders take things easy and they seem to like spacious grounds around their homes, spending a lot of time and care on them. Owing to the high cost of lumber and few servants the homes are mostly small houses, with roofs of corrugated iron.

The city, because of its natural slope, is splendidly drained. Sewage is collected in a tank, chemically treated and then discharged into the sea at ebb tide so that it is carried out of the harbor. Sixteen miles back in the hills are two great reservoirs with a combined capacity of 770,000,000 gallons, which supply the city with water. Rubbish is burned in an incinerator, and health is further protected by having the abattoirs for the killing of hogs and sheep located seven miles out. City-owned fish and vegetable markets have recently been introduced.

Public swimming pools have been built for those who

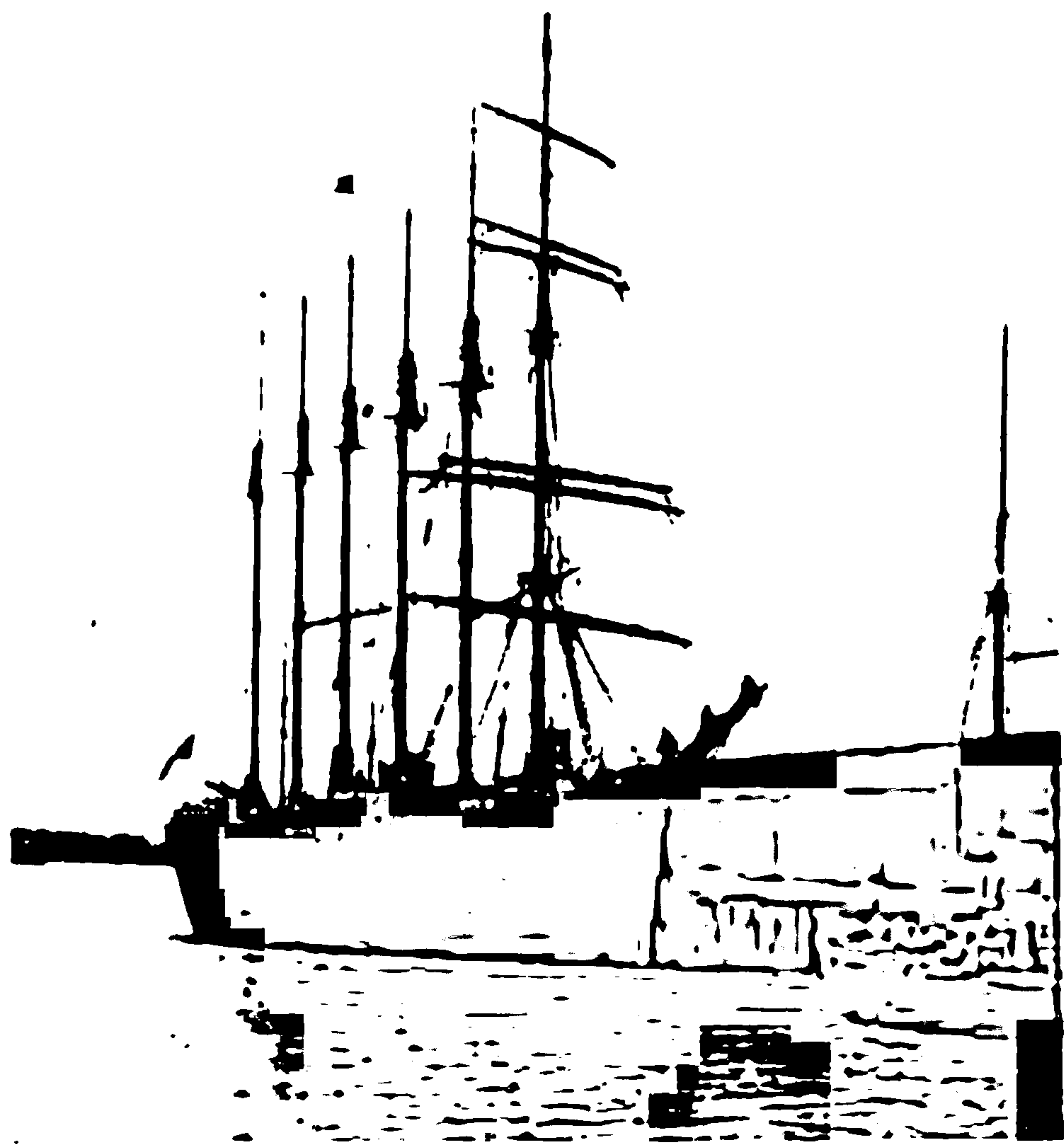


A view of Auckland and its harbor, taken from an airplane.

prefer them to a plunge at the beaches. Twelve public parks offer recreation spots.

Sunday is indeed a day of rest in Auckland, as all business is suspended and the people spend the day in the open. I hired a motor car and visited several places of interest in the vicinity. Many of the hills are historic, as they were the scenes of battles in the early days when Auckland was one of the centers of the warfare between rival tribes of Maoris, and later between the Maoris and the whites.

Of them all perhaps the most famous is One Tree Hill, where Maungakieki Pah, the most formidable of the old Maori forts, was twice taken by enemy tribes. Once it fell before the crafty attack of Chief Hongi, who has been called the Maori Napoleon, and who put to death hundreds of the de-



This is a picture of the American barkentine *R. Sterling* of Blaine, Wash., named after its owner and commander, who is proud of the fact that he is skipper of the largest sailing ship which lies the South Pacific. The *Sterling* put into Auckland for Christmas and unloaded a cargo from Australia.

fenders of the fort when it fell. Many years later another old war dog, Te Whaakiaki, staged a similar massacre. The caves of One Tree Hill still occasionally yield up the bones of the victims of its bloody days.

In spite of its natural advantages, Auckland was shunned by the white man long after the bleak shores of the north end of the peninsula had been settled. Finally, however, a small settlement sprang up there, and before long the capital, which up to then had been located at Russell, was moved to Auckland. Still later the capital was

moved to Wellington, which was more centrally located and which took advantage of the fact that the gold rushes had well-nigh depopulated Auckland and robbed it of its honor as the center of population of New Zealand.

This is being written in January, which corresponds to our month of July in the United States. Auckland is about as far south of the equator as Washington, D. C., is north of it, and the climate at this time of year is delightful. But the residents of the city are not wearing the thin, light clothing which we associate with July back home. I have seen but few men who leave off their vests. The women wear loose, full skirts which hang modestly to their shoetops, and they shield their faces from the sun with wide-brimmed hats.

I like the people of Auckland—they are so friendly. From

the official who thanks you for submitting your passport, to the waiter whose proffer of vegetables you have just declined, they are polite in the extreme. There is no objectionable display of authority. Clerks in stores are not cross, and the auto driver who brings his car to a stop because you are confused by the unusualness of running the traffic on the left-hand side of the street, does not curse you, but smiles instead.

Polite, agreeable and accommodating as they are, however, they do not yield to American hurry. Your laundry won't come back inside of a week; suits which need pressing will come back in a few days if you are insistent enough. Auckland is restful and nerve-quieting, and it soon becomes no hard task to take a nap once a day and sleep soundly at night in the bargain.

Its nearness to the kauri forests has given to Auckland



Looking over Auckland from a building near the water front. In the distance is Mount Eden, highest of the extinct volcanoes which surround the city. Auckland is a city of hills.

several industries allied with the timber business, such as shipbuilding, sash and door making and the manufacture of varnish. Near the city are the great dairying and farming districts, and the resulting products—cheese, butter, meat, hides, wool—are among the principal exports. Most of the material is shipped in its raw state, but Auckland has rope and twine factories and other industries on a small scale for home supply. On the shores of the bay are the only sugar refineries in all New Zealand. Pipe clay is plentiful on the peninsulas, providing the raw material for the brick and tile and pottery industries of Auckland. Gold mines and sulphur mines and a few deposits of coal of fair quality are located near the city.

Wellington is the capital of the Dominion of New Zealand, as well as its largest city. Its business portion lies on made ground wrested from the water of Port Nicholson, which is reached thru stormy Cook's Strait. Its residential section straggles back from the water and is scattered among hills so abrupt and steep that a straight climb is impossible, and all streets twist and zigzag to get to the various terraces, some 700 feet above the sea. Recently suburban towns have been taken inside the city limits and Greater Wellington now covers 1,600 acres of ground. Over this big area is spread a population of 100,000.

Auckland has never quite forgiven Wellington the fact



From this tower in the business section of Auckland's street car traffic is controlled. As cars pass this tower, where a record of schedules is kept. Fares are charged according to distance traveled, lines being divided into sections over which passengers may ride for ten cents a section. The longest ride in one direction is eight miles for twelve cents.

that the seat of government was taken from Auckland to Wellington nearly sixty years ago, but the latter place seems far better adapted for a capital because of its central location at the southern end of North Island and within easy reach of all parts of the Dominion.

Wellington's history begins about 1839, with the arrival of men representing the New Zealand Company, which had a scheme for colonization of the country. The presence at Port Nicholson of a number of traders already had attracted many rough characters, and the better element among the new arrivals soon formed a little government, which, however, the crown officials at Auckland, then the capital, declared was illegal. So troops were sent down to oust the self-appointed



A panoramic view of Wellington

vigilantes, but to their surprise they were received with three cheers and the expected clash did not materialize.

For the next year or two the little town was kept busy by hostile Maoris and it was not until the last trouble with them was over, in 1846, that the settlers began to spread out from the narrow strip of beach upon which the first houses were built and to make their homes upon the hills circling the harbor and the gullies between these hills.

Wellington's early days were days of struggle. The very hilly land made the city's growth slow, but Providence took a hand in 1853 with an earthquake, which, while it did much damage, also did a great deal of good, for it dried up a swampy area near the little settlement, raised the whole coast line



and its harbor, Port Nicholson.

and made possible the vast reclamation projects which have added so much to the city's level part.

Wellingtonians laugh to scorn the warning sounded in other parts of the Dominion against the day when an earthquake will wipe out Wellington as it did San Francisco. The people of the capital have outlived their old fear of earthquakes, the fear which for years kept them from building substantial structures and resulted in a city of frame buildings. Today you will find buildings of brick and stone replacing the wood, and they are going higher in the air. Even the government is going ahead with a big program of construction in order to house its many departments, now scattered all over the downtown section of the city in all kinds of buildings. You almost require a guide if you are going to visit many governmental departments, for very few Wellingtonians have any idea where they can be found.

The hills so surround Wellington that only from each end, along the water's edge, can it be entered on the level. These same hills seem to be no protection from the winds which frequently sweep the city. The severe winds there make the harbor dangerous for ships which are compelled to anchor in midstream when the docks are full. The mud at the bottom of the harbor is treacherous and will not hold even the biggest anchors in a bad blow.

The city officials of Wellington have for years been working on a carefully mapped-out plan to have the city limits take in every foot of the harbor frontage, and now the line includes all the small boroughs or towns surrounding it, except one. In order that the city may never be cursed with congested districts the entire main portion is separated from suburbs by a belt of unimproved forest land. This is leased for grazing purposes with the provision that the public may have free access to all parts of the belt during the day. In this belt are the city's recreation centers, including municipal golf links and tennis courts.

The level area has been saved for business purposes, too, by putting the botanical gardens at the very top of one of the

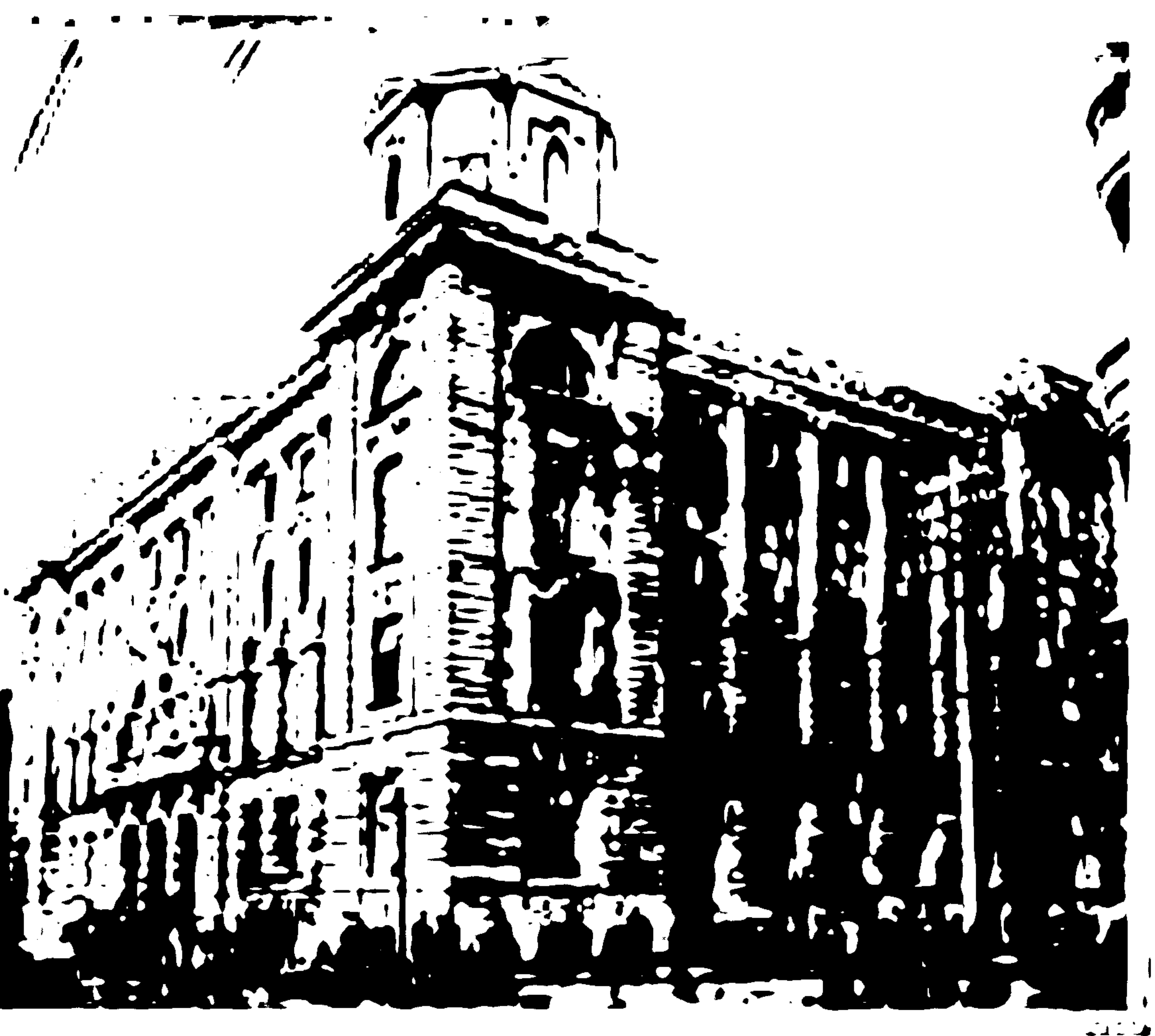
highest hills. It is a beautiful place, reached by an inclined railway operated by cables, and it affords a splendid view. Further recreation is to be found in a tract of 850 acres, called Day's Bay, located across the harbor.

Wellington owns its street car system, its electric lights, the water supply and drainage system, the fire brigade, public libraries, cemeteries, baths, slaughter-houses, and handles the supply of milk which is served thruout the city. In the city proper are twenty-one miles of street railway, while others run to the principal suburbs.

In few cities of the world is a greater effort made to keep the milk supply pure. Wellington buys all milk within a radius of twenty-five miles and some as far as a hundred miles, and no other is permitted to be sold there. The milk not needed for consumption is turned into butter and cheese and sold by the city, which also has its own ice plant in connection.

Wellington boasts of the best main street in any city in New Zealand. Lambton Quay, it is called, and it is very wide except at one end. It is the principal business thorofare; its shop windows are a treat to the passerby, and you will see in them displays that would do credit to a much larger city. The people who pass you on Lambton Quay seem to have more of a hustle to them than those in the three other cities of New Zealand, where life appears to be taken more leisurely. Auckland has its Queen Street, Dunedin its Princess Street and Christchurch has beautiful Cathedral Square, but Lambton Quay eclipses them all.

During the day it is a hive of activity, but at night it is most quiet. There is no night life in Wellington except for theater-goers, no doubt because of the climb back to the homes on the hills. It is doubtful if being the capital is doing Wellington very much good today. Certainly it does not seem to have fared well from the government at the expense of its three rivals. Its railway station is far off the beaten track and consists of two ancient wooden buildings. Until recently the government buildings were scarcely a credit to either the city



This magnificent building houses both the mail and telegraph service in Wellington. It is built of native stone and covers a full half block, being one of the finest buildings in the Dominion.

or the government. Now a big, dignified Parliament House is being completed, huge wooden structures which have housed government offices are being discarded, and splendid buildings, some of New Zealand white marble, are being erected.

The capital is unfortunate in one particular — it has no great agricultural district on which to draw. New Zea-

land depends primarily upon its exports of wool, meat, hides, butter, cheese, flax and coal for her prosperity, and Wellington holds second place among the ports from which these products are shipped. Her export trade suffered a slump during the war, largely as a result of the curtailment of shipments abroad of gold found in New Zealand, and she has never recovered. It is from her imports that Wellington profits most. The central location of the capital makes it the best place from which to distribute goods from other countries thruout the Dominion, and it is quite likely to retain its supremacy in this respect.

Wellington is the financial center of the Dominion and here are located the headquarters of the six big banks of New Zealand. Other features of the capital city which struck me as worth recording are the magnificent twenty-eight mile drive around the bay, the only crematorium owned by a city in New Zealand, a splendid zoo and the great number of residences

supplied with both heat and light from the city-owned plant.

There are fifty-two churches and schools and twenty-three charitable institutions in Wellington.

The climate I found delightful during our stay. I learned that the lowest known temperature was 29 degrees and the highest 88 degrees, while the average is around 55 degrees. The rainfall is about fifty inches annually.

The visitor who wanders out of the most modern part of the business section into the original settlement could easily imagine that he had been taken in a moment's time to another



This picture of Wellington Harbor gives an idea of how the steep cliffs extend down to the edge of the water. The business district has been built on made ground, reclaimed from the water of Port Nicholson. Many of the terraces on which the residential districts are located are too steep for a straight climb, and, consequently, the streets zigzag and twist to avoid the impossible grades.

place. The streets become more crooked. Frame one-story buildings which are several decades old are still tenanted by small shops, and side by side with them rise modern office buildings of several stories, built of brick and stone. Fruit stores kept by Chinamen are sandwiched in between more pretentious dry goods stores. Over small and large alike are wooden awnings built out over the sidewalk as protection against the frequent showers which are very apt to fall from a clear sky and without warning.

The Wellington wharfs necessarily have to be equipped with the most powerful and up-to-date machinery obtainable to handle the vast amount of incoming and outgoing goods which pass thru the port. It, like other ports of the Dominion, is governed by a harbor board. This board, however, has distinctive powers in that it receives incoming goods at the ship's side, gives receipts for them and thereafter is responsible for their delivery to consignees or for reshipping on other vessels. With the authority thus centralized there is not the conflict that would ensue if private enterprises were permitted to have a hand in the management of the wharfs. It is said that ships are loaded and unloaded with greater speed at Wellington than at any other port in New Zealand.

The board has full charge of piloting ships in or out of the harbor but does not make piloting compulsory, because the channel, being dangerous, is so well marked that a commander can bring his ship in safely without a pilot. Coming in from the South Island on the night boat we saw at dawn the wreck of a small vessel, lost with all on board the night before, piled up on the reefs which have claimed many ships there in days gone by.

Referring again to the cordial politeness I encountered in New Zealand, I am reminded that on departing from Wellington I tipped the waiter who for two weeks had taken good care of my party of four persons. He was a good waiter, and as I handed him his tip I remarked that his considerate interest in us had contributed much to our pleasure and comfort. Without looking at the amount of the tip, he insisted that it



Lincoln Agricultural College, near Christchurch. Its buildings stand in the midst of 940 acres of rich land owned by the Province of Canterbury. Until two years ago this college was self-sustaining, for, while it is educational, it likewise runs its rich acres on a commercial basis. The government now gives it a subsidy in order that more time may be devoted to experimental work.

had really been a pleasure to wait on us, and, in all seriousness, added, "In fact, one wouldn't suspect that you were Americans."

"The Garden Spot of New Zealand" is what they call Christchurch and the Canterbury Plains in which it is situated. The plains, 150 miles long and 50 wide, are the only extensive level spaces on either the North or South Island, and it is on the 3,000,000 acres there that New Zealand farming is to be seen at its best.

Christchurch, with its population of 100,000, including its suburbs, is in the South Island. It was founded by a colony of men and women sent out by the Church of England, hence its religious name. You get to it from Wellington by an all-night boat run of 175 miles, then seven miles by train from Port Lyttleton.

I found Christchurch the best laid out city in New Zealand. Its streets are level, wide and clean, and run at right angles to

each other, in marked contrast to the mazes of hills, streets, lanes and alleys which are to be found in Auckland, Wellington and Dunedin. The buildings are mostly of brick and stone. Streets and sidewalks are paved with crushed stone and asphalt,

and where the curbing should be there runs constantly in a gutter a stream of water fed by artesian wells. Thru the very heart of the town runs a placid little stream, the Avon, lined deeply on both sides by beautiful trees and well-kept shrubbery, while at every street it is crossed by quaint wide bridges.

Christchurch is a transplanted bit of southern England. It is, too, the Boston of New Zealand, for the forefathers who founded the Province of Canterbury made wise provision for education—primary, secondary and university—and also included a plan for agricul-



This beautiful edifice is the Anglican Cathedral in Christchurch. This city, which is the Boston of New Zealand, originally was established as a model Church of England settlement. The foundation stone of the cathedral was laid in 1864, within fourteen years of the founding of the settlement, and the building was completed in 1904.

tural education for those of the future generations who might wish to farm the land scientifically.

Thus it happens that a few miles out of Christchurch I found Lincoln Agricultural College, founded in the late 70's. Its buildings, which can care for a maximum of fifty-one students, are set in the midst of 940 acres of what we in the United States would call prime bottom land. The land belongs to the Province of Canterbury and is administered by a special board. Until two years ago it was entirely self-sustaining, for it does its farming on a commercial basis.

Banks' Peninsula is a wonderful bit of country. There dairying flourishes amid some wonderful scenery that equals that of the Alps of Switzerland. To the very tops of the hills is grown a cereal called cocksfoot that was a revelation to me.



The River Avon, which crosses Christchurch at an angle, flows thru some of the most beautiful gardens in the Dominion. The stream is just deep enough for the rowboats which crowd its surface in the evening. Well-kept shrubbery and groves of trees line the banks.

Originally brought from England, it has been sown thruout the peninsula on soil that once bore dense forests. It brings a double profit. The seed is sent abroad for malsters and the plant makes excellent cattle feed. Moreover, beneath the heavy growth of cocksfoot grows native grass upon which sheep and cattle graze after the cocksfoot has been gathered.

The crop is harvested with the sickle and scythe, being spread out to cure in the sun. I saw men at the harvest, 2,000 feet above sea level, with clouds swirling close overhead, and far beneath them the waters of Akaroa harbor, famous as the site of a notable Maori battle. The odd thing about

the way cocksfoot came to New Zealand is that a farmer sent back to England for clover. Instead he got other seed, and, in disgust, he cast it to the wind. But when he saw what grew from this seed he recognized it as cocksfoot, and thus was started a valuable crop which now covers many thousands of acres each year. The seed is very light and weighs only thirteen pounds to the bushel.

The vast hills, denuded of the timber which once

Harvesting cocksfoot 2,000 feet above sea level.

covered them, today are great grazing grounds for sheep and dairy herds. Nestling in the clefts of the hills are scores of farmhouses, and the vistas are so charming that we grew quite as enthusiastic as did our companion, Dr. Henry T. J. Thacker, the mayor of Christchurch, who was born on one of these back "stations," and who was our host on the trip.

Dr. Thacker is immensely proud of his city, and rightly so. It is essentially a city of small homes, with not a single apartment house, and no slums. Its gardens are among the finest in the Dominion. Its churches are easily the most pretentious, from the majestic Anglican Cathedral, located in the square which is the heart of the city, the Roman Catholic Cathedral, and down to scores of smaller structures, every one of them artistic to high degree. The city's schools and colleges are unsurpassed in New Zealand, and Christchurch is looked up to as the Dominion's center of learning.

Christchurch boasts that it has the best street car service of the four big cities, in spite of the demands made upon it by the fact that the people seek their amusements and sports away from the city itself, in the marine suburbs beyond the hills or in the rural districts. Cheap electric power has given the city the only general two-cent car fare in New Zealand.

The cause of this lies some eighty miles from Christchurch. At Lake Coleridge is the biggest hydro-electric development in the southern hemisphere. This natural lake, located back in the hills, was considered so valuable a source of water power that the Dominion government took control of it; seeing the vast possibilities of which the Lake Coleridge project is the forerunner, it has passed a law prohibiting the acquisition of water power by any corporation or individual.

Lake Coleridge is fringed by mountains at an altitude of 1,600 feet. By means of a tunnel less than a mile long a fall of five hundred feet was obtained; the water after being used runs into the Rakaia River. Today enough power is being developed to supply all the light and power needed in Christchurch, as well as in much of the surrounding country. When certain improvements are completed, not only the Canterbury

Plains but far-away towns and rural districts can be supplied. In the meantime many industries are being attracted to Christchurch by the cheap electrical power.

When Mark Twain was touring New Zealand in 1895 he made quite a hit in Dunedin, fourth largest city of the Dominion, with a little speech in which he touched on the Scottish element in its population. "When I was passing thru the North Island," he said, "I noticed that on the gates in the fences on each side of the railroad right-of-way there were signs which read, 'Please close the gate,' in the characteristic polite way of the English. But when I passed into Otago Province I noticed that the wording of the signs was different. They read, 'Any person who fails to close this gate after passing thru it will be subject to a fine of five pounds.' Then I knew that I had arrived where the Scots ruled."

I, too, was told before I started for Dunedin that I would



A snapshot of one of the principal corners in Dunedin, the farthest south big city of New Zealand. The business section is laid out on level ground which was once mud flats. The architecture in Dunedin is elaborate and the buildings substantial because earth shocks seldom occur, altho one woke up Mr. Boyce and his party at 5 o'clock one morning.

find it typically Scotch. But when I got there I began to wonder where the Scotchmen had gone. I found that the old lines had been wiped out and that the people were now entirely New Zealanders, who did not care to be called either Scotch or English or Irish, but favored the all-embracing name of British.

Dunedin name is indicative of the ancestry of its first settlers. They wanted to call it New Edinburgh, after the big city of the homeland, but there are so many Edinburghs in the world that the proposal to call it Dunedin, which is the Celtic name for Edinburgh, was quickly adopted. Many of the streets of the city bear the names of streets of the original Edinburgh, and the little stream which winds its way across the north end of the city is called the Water of Leith.

Until 1847 the only white men who had been attracted to Otago Heads, as the little settlement was then called, were sealers and whalers, but in that year several small vessels arrived bearing colonists sent out by the Free Church of Scotland, so that by the end of the year there were 500 white persons there. This population was greatly increased by the discovery of gold in Otago in 1861. Hard times followed the dying out of the gold fever, but the city was never set so far back but that it could quickly recover; today, with its suburbs, it has a population of 70,000.

Peculiarly enough, the men who so anxiously tore up the soil in their hunt for gold in the dry lands of central Otago did not realize that fortune of another sort was in that soil. That country, thru irrigation, has developed into one of the best fruit-producing parts of all New Zealand.

During the early gold rushes, and during the later ones when the Chinese followed the Europeans as the chief seekers after the yellow metal, a few men kept experimenting with fruit, believing that the soil was best adapted for that purpose. After their first success many others joined them, and now there is raised an abundance of grapes, peaches, nectarines, apricots, pears, and several kinds of nuts. The rainfall is slight—fourteen inches a year—but irrigation makes up for the lack.



Interior view of the Mosgiel Woolen Mills near Dunedin. The mill, one of the oldest in the Dominion, grows its own sheep for wool, and not only makes cloth out of it, but turns out rugs of the finest quality. Like all other mills in New Zealand, it manufactures only for home consumption, because exportation of woolen goods is prohibited until the Dominion's supply, depleted by the war, is built up again.

For years birds proved serious obstacles to the industry, but the introduction of the small German owl drove away the birds.

The land is rich in potash and phosphoric acid, so that the addition of lime and humus makes it eminently suitable for the raising of small fruits. Raspberry and strawberry growing are being taken up by increasing numbers. The climate is ideal for this purpose. It is rare for the country to be under snow, but the air in winter is cold and dry, with frosts in June and July, their midwinter.

Dairying is carried on on almost as great a scale as in Canterbury, and many sheep and beef cattle are raised. The methods are practically the same as in Canterbury, but the farmers of Otago have learned that they can produce better alfalfa and get four big crops a year.

Port Chalmers, seven miles from Dunedin, is the stopping place for incoming vessels of deep draught. From Chalmers

to Dunedin there is a channel up an estuary of the sea. The channel naturally was twelve feet deep, but was dredged out to a depth of twenty feet, an ample depth at the time. Now, however, it is only the smaller vessels which can get up to Dunedin, so it is being planned to dredge several feet deeper or else build locks to take care of the big boats. This would make available again Dunedin's big dock, once the largest in the Dominion.

The Union Steamship Company, which controls most of the shipping in Australasia, and which started in 1872 with three tiny vessels, making New Zealand ports only—now grown to a fleet of a hundred—was one of the factors in making Dunedin a city of importance. The Union Company has most of the mail-carrying contracts between Australia



This photograph shows a crowd cod-fishing off a wharf near Dunedin. New Zealand is a great fish country, and many varieties of fish are found in its waters. On holidays wharfs and jetties are crowded with men and boys trying to hook "a big one." Most cities engage in the fish business and sell at ridiculously low prices at public markets.

and New Zealand, Canada and Australasia, and virtually all of the sea travel in this part of the world is on its ships.

Dunedin does not depend upon its maritime business for all of its prosperity. Near it are located four of the nine big woolen mills in New Zealand. It is an iron and steel manufacturing center. Its nearness to the fruit district has made it the logical location for preserving plants and candy factories. In its suburbs are manufactured farming implements, stoves and ranges. Here also is one of the car-building factories of the Dominion railways, and only a few miles away is a paper mill. There are several large packing plants near Dunedin to take care of the great flocks of sheep on the 9,000,000 acres in Otago, half of which is devoted to sheep.

Some day Dunedin will be a much greater manufacturing center, for, like Christchurch, it is close to many sites capable of developing great water power. It now has the second largest hydro-electric plant in the Dominion, located at Waipori Falls.

Dunedin has one industry peculiarly its own, developed from what was the greatest menace to agriculture in the South Island—the rabbit pest. Miles after miles of rabbit-proof fencing are to be found in Otago, and special boards deal with the problem of extermination. Many, however, have found in the rabbit a good source of income, and they are slaughtered by the wagonload in drives where many hunters take part. Great quantities of carcasses are shipped to other countries in refrigerating ships, a trade developed during the war and now assuming considerable importance.

In Dunedin is located Otago University, one of the four affiliated schools operated by the Dominion government as the University of New Zealand. Here also are Knox College and Selwyn College, denominational schools, as well as a dental school and the only medical school in New Zealand which is also operated in connection with a hospital.

Much of the land upon which Dunedin is built was once mud flats. Hundreds of acres among the high hills back of the business section were under water in the early days, but now provide homes for some 22,000 people. The city looks

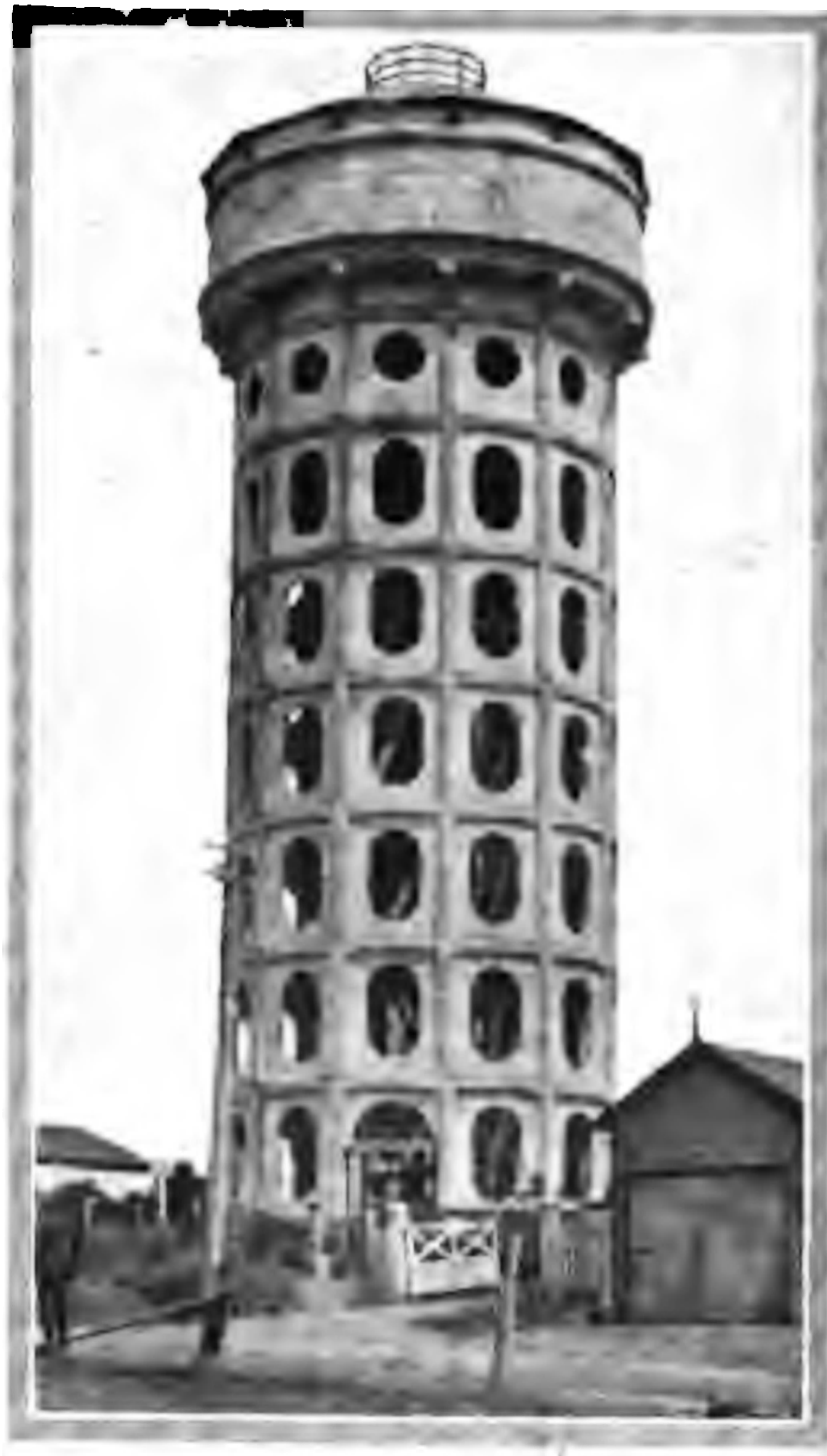
as if it had been jumbled together by some fantastic upheaval of the earth in the long ago.

I inspected the Mosgiel Woolen Mills, employing three hundred men and women. It is located some fourteen miles from Dunedin and is one of the largest as well as one of the oldest mills in the Dominion. It raises its own sheep and makes the wool from their backs into cloth and rugs which are hard to equal.

Altho Dunedin is not the principal port from which meat is shipped, it was the one from which the movement was inaugurated, for in 1882 a sailing vessel fitted with a freezing machine and insulated chambers carried frozen mutton to London and demonstrated that it was possible to make sheep New Zealand's

biggest industry. New Zealanders were the first to taste their own frozen mutton, for while the ship was being loaded the crank of the freezing machine broke and it became necessary to sell for local use the 1,500 carcasses already aboard.

In Dunedin I met one man who was connected with this venture—Sir John Roberts, probably the most influential citizen of the city today. Born in Scotland, he emigrated to Australia to enter and study the wool business at first hand, and himself began at the bottom as a spinner. On the first venture of shipping frozen meat to England he was one of the five sheep-raisers who furnished the carcasses.



In Hamilton, one of the prosperous secondary cities of North Island, they have broken away from the conventional "stand pipe" as a source of water pressure. The steel and concrete skeleton of this water tower is encased in a concrete shell which gives the impression of a mediaeval tower.

CHAPTER VII

A MEMORIAL TO CAPTAIN SCOTT

THERE stands in Christchurch a memorial of Captain Scott. Perchance you come onto it by accident when you are seeking evidence of commercial success and your mind is occupied with the statistics of commerce. Your steps bring

you suddenly to a modest monument of white granite. You stop before it, only mildly curious, and read the bronze tablet because you have the habits of a confirmed traveler.

"Robert Falcon Scott." The name is familiar. Your mind hesitates a minute or two as it puts aside the statistics of commerce, and then full understanding dawns upon you, involuntarily your hand goes to your hat, and, with uncovered head, you look up at the white figure in its polar garb; the intrepid, courageous explorer done

in marble! The inspiring story of Captain Scott's dash to the South Pole and the tragic end of the five men who laid down their lives on the great ice fields of The Barrier comes back to you.

Immediately you remember that this tragic epic began in Lyttleton, not far from Christchurch, and the spiritual being within you which worships at the shrine of heroes will give



The *Terra Nova* fast in the ice fields of the Antarctic.



The monument to Captain Scott in the city of Christchurch, in memoriam of the intrepid explorer, who, with his four companions, traveled to the South Pole, only to lose their lives on the return trip.

you no rest until you have gone over to Lyttleton and walked along the docks, looking away to where the bending skies seem to blend with the restless sea to form the curtain for the stage of tragedy.

Lyttleton is the main port of the Canterbury district. It is practically land-locked, and, therefore, offers a desirable protection for shipping. It is the port where all South Pole expeditions outfit in the Pacific waters. It is so close to Christchurch that one might refer to it as a Christchurch suburb if it were not for the fact that rivalry between the two towns makes it certain that each would strenuously object to being called a suburb of the other. In traveling from Lyttleton to the famous Canterbury Plains one passes under the Port Hills



Lyttleton and its harbor as seen from an airplane. From this port Captain Scott set sail on his heroic and tragic expedition to the South Pole.

thru the longest tunnel in New Zealand. It is one and three-fourths miles long.

Because of its dock facilities and its "farthest south" location, Lyttleton is an ideal jumping-off place for expeditions to the Antarctic regions. In 1901 Captain Scott made the port with the ship *Discovery*, in which he made his first trip to the Antarctic. The superstitious might have seen in an incident attending the departure of this first expedition a prophecy of tragedy. Lyttleton gave the explorers a royal send-off, and every available craft followed the *Discovery* out to the open sea. One of the ship's sailors, Charles Bonner, had climbed above the crow's nest to the top of the main mast to wave his farewells to those aboard the other boats. It is supposed that when the swell of the open sea struck the *Discovery* the young man was pitched from his precarious station. He plunged head foremost to the deck and was instantly killed when he struck a corner of the iron deckhouse.

When Captain Scott decided to make a dash to the South Pole in 1910 he again made Lyttleton the jumping-off place. Here the Scottish whaler *Terra Nova* had her final inspection and provisions for the expedition were loaded. With a capable and determined crew, well equipped for any emergency, the ship sailed from Lyttleton November 26, 1910. A notable demonstration was staged as a farewell to the explorers. The ship put in at Port Chambers for coal and headed into the ocean wilderness of the Antarctic, November 26.

The story of that journey is too well known to justify a repetition of it here. The ship battled terrific storms; time and again it seemed certain that it would go down in mountainous waves which broke over it. Several times I have heard persons tell as an impossible story, how a wave swept a man overboard and another wave returned him to the ship. This actually happened during the voyage of the *Terra Nova*, the unfortunate—or fortunate—victim being a dog. During one of the storms a wave broke over the ship and caught one of the dogs with such force that his chain was broken and



Over 800 miles of ice fields, Captain Scott and his four companions dashed to the South Pole from One Ton Camp. Winds, snow and accidents held them back on the return journey until their supply of food was exhausted. With food and shelter but eleven miles away, they heroically met their death in a terrific storm.

he was carried into the sea. A few minutes later another wave swept the deck and returned the dog.

Landing his supplies in McMurdo Sound, Captain Scott's expedition moved in to the edge of The Barrier, a great field of snow and ice. Here was established One Ton Camp, from which the Captain and four companions made their dash to the Pole, only to find that Amundsen's Norwegian expedition had arrived ahead of the British by a month. The five men then took up the 800-mile journey back to One Ton Camp. Edgar Evans, the strong man of the party, was injured in a fall and this slowed down the pace. He died at the foot of Beardmore Glacier. Terrific cold and unprecedented storms held back the party. Captain L. E. G. Oates frosted his feet

and they soon were in such condition that he could scarcely walk. Realizing that he was jeopardizing the safety of his companions during a severe blizzard he deliberately staggered away in the storm, to be seen no more.

The remaining three men, Scott, Dr. E. A. Wilson and Lieutenant H. R. Bowers, struggled on until they were within eleven miles of One Ton Camp, which would have meant life to them. Here, with food and fuel gone, they were overtaken by the worst blizzard in their experience and were unable to continue. Scott evidently was the last to succumb, and to the end he continued to write in his diary.

While every effort was made to rescue the men, the relief party could not get thru The Barrier until October of 1912. The



Captain Scott and his four companions as they appeared on The Barrier, in the icy desert of which they were to lay down their lives.

last entry in Scott's notes was dated March 29, 1912. It read:

"Since the 21st we have had a continuous gale from W. SW. and SW. We had fuel to make two cups of tea apiece, and bare food for two days on the 20th. Every day we have been ready to start for our depot, eleven miles away, but outside the door of the tent it remains a scene of whirling drift. I do not think we can hope for any better things now. We shall stick it out to the end, but we are getting weaker, of course, and the end cannot be far. It seems a pity, but I do not think I can write more."

Below this entry was scrawled:

"For God's sake, look after our people!"

When the relief party arrived the little tent still was standing and in it were the bodies of the three heroes. Scott's account of the trip and the scientific notes were found beneath the Captain's body. He had done his utmost to preserve them for the benefit and information of the living.

On November 12, 1912, the relief party built a rough cairn on the spot where the bodies were found and in the midst of this wilderness of death deposited a document which read:

"November 12, 1912. Lat. 79 degrees 50 mins. south. This cross and cairn are erected over the bodies of Captain Scott, C. V. O., R. N., Doctor E. A. Wilson, M. B. B. C., Cantab., and Lieutenant H. R. Bowers, Royal Indian Marine—a slight token to perpetuate their successful and gallant attempt to reach the Pole. This they did on January 17, 1912, after the Norwegian expedition had already done so. Inclement weather with lack of fuel was the cause of their death. Also to commemorate their two gallant comrades, Captain L. E. G. Oates of the Inniskilling Dragoons, who walked to his death in a blizzard to save his companions about eighteen miles south of this position; also of Seaman Edgar Evans, who died at the foot of Beardmore Glacier.

"The Lord gave and the Lord taketh away; blessed be the name of the Lord."

Captain Scott and his gallant companions spectacularly exemplified the spirit of the men who have carried the British

flag thruout the Seven Seas and onto every continent until the sun never sets on the glory of the British Empire.

It was this spirit which reclaimed New Zealand and Australia from savagery, established orderly government, and built up a prosperous people, and it is this spirit which today stands sentinel for white civilization in the far outposts of the Pacific.

As I gazed on the memorial to Captain Scott there in Christchurch, and the thrilling story of his indomitable courage came back to me, I found a new meaning in the words of the poet:

“Out of the night that covers me
Black as the pit from pole to pole,
I thank whatever gods may be
For my unconquerable soul.”



The rough cairn erected by the relief party on the spot where the bodies of Captain Scott and two of his companions were found.